HIGHWAY WORK PROPOSAL

Proposal Number: Ø 7

Wisconsin Department of Transportation
DT1502 10/2010 s.66.29(7) Wis. Stats.

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Dane	5992-09-11	WISC 2014 100	City of Madison, East Johnson Street (North Butler Street - North Baldwin Street)	Local Street
Dane	5992-09-12		City of Madison, East Johnson Street (North Butler Street - North Baldwin Street) Local Utilities, Sanitary Sewer	Local Street
Dane	5992-09-13		City of Madison, East Johnson Street (North Butler Street - North Baldwin Street) Local Utilities, Water Main	Local Street

This proposal, submitted by the undersigned bidder to the Wisconsin Department of Transportation, is in accordance with the advertised request for proposals. The bidder is to furnish and deliver all materials, and to perform all work for the improvement of the designated project in the time specified, in accordance with the appended Proposal Requirements and Conditions.

Proposal Guaranty Required, $ 250,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: April 8, 2014 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time May 30, 2015	
Assigned Disadvantaged Business Enterprise Goal 8 %	This contract is exempt from federal oversight.

This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or agents, officer, or employees have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal bid.

Do not sign, notarize, or submit this Highway Work Proposal when submitting an electronic bid on the Internet.

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State Wisconsin)

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Grading, base aggregate dense, storm sewer, sanitary sewer, water main, HMA pavement, concrete curb and gutter, concrete sidewalk, permanent signing, pavement marking, street lighting, traffic signals.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

The bidder, signing and submitting this proposal, agrees and declares as a condition thereof, to be bound by the following conditions and requirements.

If the bidder has a corporate relationship with the proposal design engineering company, the bidder declares that it did not obtain any facts, data, or other information related to this proposal from the design engineering company that was not available to all bidders.

The bidder declares that they have carefully examined the site of, and the proposal, plans, specifications and contract forms for the work contemplated, and it is assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the specifications, special provisions and contract. It is mutually agreed that submission of a proposal shall be considered conclusive evidence that the bidder has made such examination.

The bidder submits herewith a proposal guaranty in proper form and amount payable to the party as designated in the advertisement inviting proposals, to be retained by and become the property of the owner of the work in the event the undersigned shall fail to execute the contract and contract bond and return the same to the office of the engineer within fourteen (14) days after having been notified in writing to do so; otherwise to be returned.

The bidder declares that they understand that the estimate of quantities in the attached schedule is approximate only and that the attached quantities may be greater or less in accordance with the specifications.

The bidder agrees to perform the said work, for and in consideration of the payment of the amount becoming due on account of work performed, according to the unit prices bid in the following schedule, and to accept such amounts in full payment of said work.

The bidder declares that all of the said work will be performed at their own proper cost and expense, that they will furnish all necessary materials, labor, tools, machinery, apparatus, and other means of construction in the manner provided in the applicable specifications and the approved plans for the work together with all standard and special designs that may be designed on such plans, and the special provisions in the contract of which this proposal will become a part, if and when accepted. The bidder further agrees that the applicable specifications and all plans and working drawings are made a part hereof, as fully and completely as if attached hereto.

The bidder, if awarded the contract, agrees to begin the work not later than ten (10) days after the date of written notification from the engineer to do so, unless otherwise stipulated in the special provisions.

The bidder declares that if they are awarded the contract, they will execute the contract agreement and begin and complete the work within the time named herein, and they will file a good and sufficient surety bond for the amount of the contract for performance and also for the full amount of the contract for payment.

The bidder, if awarded the contract, shall pay all claims as required by Section 779.14, Statutes of Wisconsin, and shall be subject to and discharge all liabilities for injuries pursuant to Chapter 102 of the Statutes of Wisconsin, and all acts amendatory thereto. They shall further be responsible for any damages to property or injury to persons occurring through their own negligence or that of their employees or agents, incident to the performance of work under this contract, pursuant to the Standard Specifications for Road and Bridge Construction applicable to this contract.

In connection with the performance of work under this contract, the contractor agrees to comply with all applicable state and federal statutes relating to non-discrimination in employment. No otherwise qualified person shall be excluded from employment or otherwise be subject to discrimination in employment in any manner on the basis of age, race, religion, color, gender, national origin or ancestry, disability, arrest or conviction record (in keeping with s.111.32), sexual orientation, marital status, membership in the military reserve, honesty testing, genetic testing, and outside use of lawful products. This provision shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The contractor further agrees to ensure equal opportunity in employment to all applicants and employees and to take affirmative action to attain a representative workforce.

The contractor agrees to post notices and posters setting forth the provisions of the nondiscrimination clause, in a conspicuous and easily accessible place, available for employees and applicants for employment.

If a state public official (section 19.42, Stats.) or an organization in which a state public official holds at least a 10% interest is a party to this agreement, this contract is voidable by the state unless appropriate disclosure is made to the State of Wisconsin Ethics Board.

Effective with August 2007 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

(1) Obtain bidding proposals as specified in section 102 of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:

1. Electronic bid on the internet.
2. Electronic bid on a printout with accompanying diskette or CD ROM.
3. Paper bid under a waiver of the electronic submittal requirements.

(2) Bids submitted on a printout with accompanying diskette or CD ROM or paper bids submitted under a waiver of the electronic submittal requirements govern over bids submitted on the internet.

(3) The department will provide bidding information through the department's web site at http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm. The contractor is responsible for reviewing this web site for general notices as well as information regarding proposals in each letting. The department will also post special notices of all addenda to each proposal through this web site no later than 4:00 P.M. local time on the Thursday before the letting. Check the department's web site after 5:00 P.M. local time on the Thursday before the letting to ensure all addenda have been accounted for before preparing the bid. When bidding using methods 1 and 2 above, check the Bid Express™ on-line bidding exchange at http://www.bidx.com/ after 5:00 P.M. local time on the Thursday before the letting to ensure that the latest schedule of items Expedite file (*.ebs or *.00x) is used to submit the final bid.

(4) Interested parties can subscribe to the Bid Express™ on-line bidding exchange by following the instructions provided at the www.bidx.com web site or by contacting:

Info Tech Inc.
5700 SW 34th Street, Suite 1235
Gainesville, FL 32608-5371
email: mailto:customer.support@bidx.com

(5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.

(6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, Madison, WI, during regular business hours.

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

1. Have a properly executed annual bid bond on file with the department.
2. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.

(2) In lieu of preparing, delivering, and submitting the proposal as specified in 102.6 and 102.9 of the standard specifications, submit the proposal on the internet as follows:

1. Download the latest schedule of items reflecting all addenda from the Bid Express™ web site.
2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid.
4. Submit the bid before the hour and date the Notice to Contractors designates.
5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.

(3) The department will not consider the bid accepted until the hour and date the Notice to Contractors designates.

B.2 On a Printout with Accompanying Diskette or CD ROM

(1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at **http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm**. Use Expedite ™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.

(2) Staple an 8 1/2 by 11 inch printout of the Expedite™ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

(3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.

(4) The bidder-submitted printout of the Expedite™ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.

(5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:

1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.

3. The diskette or CD ROM is not submitted at the time and place the department designates.

C Waiver of Electronic Submittal

(1) The bidder may request a waiver of the electronic submittal requirements. Submit a written request for a waiver in lieu of bids submitted on the internet or on a printout with accompanying diskette or CD ROM. Use the waiver that was included with the paper bid document sent to the bidder or type up a waiver on the bidder's letterhead. The department will waive the electronic submittal requirements for a bidding entity (individual, partnership, joint venture, corporation, or limited liability company) for up to 4 individual proposals in a calendar year. The department may allow additional waivers for equipment malfunctions.

(2) Submit a schedule of items on paper conforming to section 102 of the standard specifications. The department charges the bidder a $75 administrative fee per proposal, payable at the time and place the department designates for receiving bids, to cover the costs of data entry. The department will accept a check or money order payable to: "Wisconsin, Dept. of Transportation."

(3) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:

1. The bidder fails to provide the written request for waiver of the electronic submittal requirements.
2. The bidder fails to pay the $75 administrative fee before the time the department designates for the opening of bids unless the bidder requests on the waiver that they be billed for the $75.
3. The bidder exceeds 4 waivers of electronic submittal requirements within a calendar year.

(4) In addition to the reasons specified in section 102 of the standard specifications, the department may refuse to issue bidding proposals for future contracts to a bidding entity that owes the department administrative fees for a waiver of electronic submittal requirements.

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

Proposal Number	Project Number	Letting Date
Name of Principal		
Name of Surety	State in Which Surety is Organized	

We, the above-named Principal and the above-named Surety, are held and firmly bound unto the State of Wisconsin in the sum equal to the Proposal Guaranty for the total bid submitted for the payment to be made; we jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. The condition of this obligation is that the Principal has submitted a bid proposal to the State of Wisconsin acting through the Department of Transportation for the improvement designated by the Proposal Number and Letting Date indicated above.

If the Principal is awarded the contract and, within the time and manner required by law after the prescribed forms are presented for signature, enters into a written contract in accordance with the bid, and files the bond with the Department of Transportation to guarantee faithful performance and payment for labor and materials, as required by law, or if the Department of Transportation shall reject all bids for the work described, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. In the event of failure of the Principal to enter into the contract or give the specified bond, the Principal shall pay to the Department of Transportation **within 10 business days of demand** a total equal to the Proposal Guaranty as liquidated damages; the liability of the Surety continues for the full amount of the obligation as stated until the obligation is paid in full.

The Surety, for value received, agrees that the obligations of it and its bond shall not be impaired or affected by any extension of time within which the Department of Transportation may accept the bid; and the Surety does waive notice of any such extension.

IN WITNESS, the Principal and Surety have agreed and have signed by their proper officers and have caused their corporate seals to be affixed this date: **(DATE MUST BE ENTERED)**

PRINCIPAL

(Company Name) **(Affix Corporate Seal)**

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

Notary Seal

(Name of Surety) **(Affix Seal)**

(Signature of Attorney-in-Fact)

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

On the above date, this instrument was acknowledged before me by the named person(s).

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

Notary Seal

IMPORTANT: A certified copy of Power of Attorney of the signatory agent must be attached to the bid bond.

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

Time Period Valid (From/To)
Name of Surety
Name of Contractor
Certificate Holder Wisconsin Department of Transportation

This is to certify that an annual bid bond issued by the above-named Surety is currently on file with the Wisconsin Department of Transportation.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the annual bid bond.

Cancellation: Should the above policy be cancelled before the expiration date, the issuing surety will give thirty (30) days written notice to the certificate holder indicated above.

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

Section 66.0901(7), Wisconsin Statutes, provides that as a part of the proposal, the bidder also shall submit a list of the subcontractors the bidder proposes to contract with and the class of work to be performed by each. In order to qualify for inclusion in the bidder's list a subcontractor shall first submit a bid in writing, to the general contractor at least 48 hours prior to the time of the bid closing. The list may not be added to or altered without the written consent of the municipality. A proposal of a bidder is not invalid if any subcontractor and the class of work to be performed by the subcontractor has been omitted from a proposal; the omission shall be considered inadvertent or the bidder will perform the work personally.

No subcontract, whether listed herein or later proposed, may be entered into without the written consent of the Engineer as provided in Subsection 108.1 of the Standard Specifications.

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS - PRIMARY COVERED TRANSACTIONS

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.

4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.

7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR-1273 - "Required Contract Provisions Federal Aid Construction Contracts," without

modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

(1) The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Projects 5992-09-11, 5992-09-12 and 5992-09-13; City of Madison, East Johnson Street; North Butler Street – North Baldwin Street; Dane County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2014 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.
100-005 (20130615)

2. Scope of Work.

The work under this contract shall consist of grading, base aggregate dense, storm sewer, sanitary sewer, water main, HMA pavement, concrete curb and gutter, concrete sidewalk, permanent signing, pavement marking, street lighting, traffic signals and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Mandatory Pre-Bid Meeting.

Supplement standard spec 102.3.1 with the following:

Prospective bidders are required to attend a mandatory pre-bid meeting on Thursday, March 13, 2014 at 10:00 AM, at the Larry D. Nelson Engineering Operations Facility, 1600 Emil Street, Madison, WI 53713.

No meeting minutes will be prepared. Issues discovered at the meeting will be handled by addendum.
102-010 (20041504)

4. Prosecution and Progress.

A General
Begin work within ten calendar days after the engineer issues a written notice to do so.

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon

approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the department's scheduled resources.

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment.

The completion of Stage 5 construction operations and reopening East Johnson Street to traffic prior to suspension of operations in the fall of 2014 is based on the expedited work schedule and may require extraordinary forces and equipment.

Complete construction operations on East Johnson Street to the stage necessary to reopen the south side curb lane to through traffic prior to 12:01 AM August 7, 2014. Do not reopen the south side curb lane until completing the following work: Stage 2 work including sanitary sewer main and laterals on south side of East Johnson Street, water main and services on south side of East Johnson Street, storm sewer on south side of East Johnson Street, HMA Pavement lower layer (15-feet wide lane) and temporary pavement markings.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the work necessary to complete Stage 2 work as defined in these special provisions and as shown on the plans prior to 12:01 AM August 7, 2014, the department will assess the contractor $1690 in interim liquidated damages for each calendar day that Stage 2 work remains unfinished after 12:01 AM August 7, 2014. An entire calendar day will be charged for any period of time within a calendar day that the Stage 2 work as defined above remains unfinished beyond 12:01 AM.

Complete construction operations on East Johnson Street to the stage necessary to reopen it to through traffic prior to 12:01 AM November 1, 2014. Do not reopen until completing the following work: Stage 5 work including HMA pavement upper layer, permanent marking and signing, permanent signals and lighting.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the work necessary to complete Stage 5 work and reopen East Johnson Street to traffic as defined in these special provisions and as shown on the plans prior to 12:01 AM November 1, 2014, the department will assess the contractor $1,690 in interim liquidated damages for each calendar day that Stage 5 work remains unfinished after 12:01 AM November 1, 2014. An entire calendar day will be charged for any period of time within a calendar day that the Stage 5 work as defined above remains unfinished beyond 12:01 AM.

The department will not grant time extensions to the interim completion dates specified above for the following:

1. Severe weather as specified in 108.10.2.2.
2. Labor disputes that are not industry wide.
3. Delays in material deliveries.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed according to standard spec 108.11.

Work on this project will not be allowed during the following dates in 2014:

- **Wisconsin Badger home football games:** September 6, 20 and 27, October 11 and 25, November 15
- **University of Wisconsin-Madison Graduation:** May 17 and 18
- **Rhythm and Booms**: June 28
- **Downtown Apartment Move in Dates**: August 16 and 17
- **Taste of Madison**: August 30 and 31.

B Contractor Coordination and Advanced Notification

Hold prosecution and progress meetings once a week. The contractor's superintendent or designated representative and subcontractor's representatives for ongoing subcontract work or subcontractor work expected to begin within the next two weeks shall attend and provide a written schedule of the next week(s)' operations. The written schedule shall include begin and end dates of specific prime and subcontractor work operations. Invite the City of Madison and Madison Metro Bus representatives to attend the prosecution and progress meetings. Agenda items at the meeting will include review of the contractor's schedule and subcontractors' schedule, evaluation of progress and pay items, and making revisions if necessary. Plans and specifications for upcoming work will be reviewed to prevent potential problems or conflicts between contractors.

Based on the progress meeting, if a new revised schedule is requested by the engineer, submit it within seven calendar days. Failure to submit a new schedule within seven days shall result in the engineer holding pay requests until received.

Contact the City of Madison Refuse Supervisor at (608) 246-4532 to coordinate for refuse collection. Provide access for refuse collection.

Coordinate work with private utility contractors performing work as described in the utility article of these special provisions. Provide access for the private utility contractors as required for the completion of the proposed private utility work. The proposed work by private utilities is detailed in the "Private Utility Plan" section of construction plans.

Notify the City of Madison Police and Fire Departments, Dane County Sheriff, Madison Metro and City of Madison Traffic Engineering at least 3 calendar days (72 hours) in advance of all traffic switches and closures of existing streets.

Notify business owners and residents at least 2 calendar days (48 hours) prior to restricting access and 3 days (72 hours) prior to closing any access. See the Traffic article of these special provisions for information on property access.

C Construction General

Typical construction sections are provided in the traffic control plans. Conform to the work zone protection as shown in the typical construction sections. Provide a minimum of 6 feet lateral clearance from the edge of travel lane to the work zone. In areas where 6 feet of lateral clearance cannot be provided, protect work zone with temporary concrete barrier. Provide a maximum 3:1 slope from the edge of the lateral clearance zone to sub-grade excavations. Limit the length of open utility trenches adjacent to the lateral clearance to 100 feet. Backfill or plate utility trenches adjacent to the lateral clearance zone during non-working hours.

D Construction Staging

Conform the schedule of operations to the construction staging as shown in the traffic control plans and as described herein unless modifications to the schedule are approved in writing by the engineer.

Stage 1 Construction:

Install temporary traffic signals (Butler Street, Blount Street, Paterson Street, Ingersoll Street and Baldwin Street).

Remove existing pavement markings from north curb lane on East Johnson Street.

Remove trees designated for removal from north terrace of East Johnson Street. Remove existing median and curb and gutter at North Baldwin Street intersection and install temporary pavement for stage 2 operations.

Place temporary pavement markings for stage 2 operations.

Stage 2 Construction:

Construct the south half of East Johnson Street: remove/grade existing pavement and reconstruct with new pavement.

Construct storm sewer, sanitary sewer, and water main improvements on south half of East Johnson Street.

Remove trees designated for removal from south terrace of East Johnson Street.

Construct sanitary sewer main and laterals, and water main and services on the south side of East Johnson Street.

Construct storm sewer main and structures and inlets on the south side of East Johnson Street.

Remove existing pavement and base material on south side of East Johnson Street. Place and grade crushed aggregate base course on south side of East Johnson Street.

Construct curb and gutter, sidewalk and drive aprons on south side of East Johnson Street.

Construct electrical conduit and bases on south side of East Johnson Street.

Construct traffic signals, conduit, and controllers on south side of East Johnson Street.

Place 15-feet wide lane of lower HMA layer pavement on south curb lane for Stage 3 operations. Place temporary pavement markings for stage 3 operations.

Intersections: (North Butler Street, North Hamilton Street and North Baldwin Street) Remove existing pavement and base material, reconstruct intersections with new sanitary sewer, water main, storm sewer, base course, curb and gutter and lower HMA pavement layer utilizing staged construction (Stage 2A through Stage 2D).

Intersections, north legs: (North Hancock Street, Stage 2A and 2B) Install storm sewer main crossing at approximately Station 15+00 from stage limit line to north limit of project on North Hancock Street. (approximately 50' of storm sewer main in North Hancock Street). Install trench patch for future traffic stages.

Intersections, south legs: (North Hancock Street (Stage 2C) North Livingston Street, North Few Street) Remove existing pavement and base material, reconstruct intersections with new sanitary sewer, water main, storm sewer, base course, curb and gutter and lower HMA pavement layer.

Intersections, south legs: (North Franklin Street, North Blair Street) Remove existing pavement and base material, reconstruct intersections with new sanitary sewer, water main, storm sewer, base course, curb and gutter and lower HMA pavement layer using staged construction. Construct south legs of intersections one half at a time.

Intersections, south legs: (North Blount Street, North Paterson Street, North Brearly Street, North Ingersoll Street) Remove existing pavement and base material, reconstruct intersections with new storm sewer, base course, curb and gutter and lower HMA pavement layer using staged construction. Construct south legs of intersections one half at a time utilizing flagged operations.

Work by others included in stage 2 operations includes installation of private utilities in the "joint trench" installation as described in the Utility Article of these special provisions. The joint trench installation from Station 10+60 to Station 14+60 will take place during stages 2A and 2B.

Stage 3 Construction:
Construct East Johnson Street north lanes: remove/grade existing pavement and reconstruct with new pavement (HMA lower layers only).

Construct storm sewer, sanitary sewer, and water main improvements on north half of East Johnson Street. Extend sanitary sewer laterals and water service laterals to properties on north side of East Johnson Street.

Construct storm sewer main and structures and inlets on the north side of East Johnson Street.

Remove existing pavement and base material on north side of East Johnson Street. Place and grade crushed aggregate base course on north side of East Johnson Street.

Construct curb and gutter, sidewalk and drive aprons on north side of East Johnson Street.

Construct electrical conduit and bases on north side of East Johnson Street.

Construct traffic signals, conduit, and controllers on north side of East Johnson Street.

Place remaining lower HMA pavement layers. Place temporary pavement markings for stage 4 operations.

Intersections, north legs: (North Hancock Street, North Livingston Street, North Few Street) Remove existing pavement and base material, reconstruct intersections with new sanitary sewer, water main, storm sewer, base course, curb and gutter and lower HMA pavement layer.

Intersections, north legs: (North Franklin Street, North Blair Street) Remove existing pavement and base material, reconstruct intersections with new sanitary sewer, water main, storm sewer, base course, curb and gutter and lower HMA pavement layer using staged construction. Construct north legs of intersections one half at a time.

Intersections, north legs: (North Blount Street, North Paterson Street, North Brearly Street, North Ingersoll Street) Remove existing pavement and base material, reconstruct intersections with new sanitary sewer, water main, storm sewer, base course, curb and gutter and lower HMA pavement layer using staged construction. Construct north legs of intersections one half at a time utilizing flagged operations.

Work by others included in stage 3 operations includes installation of private utilities in the “joint trench” installation from Station 14+60 to Station 33+25 as described in the Utility Article of these special provisions.

Stage 4 Construction:
Construct curb and gutter at bumpout locations on south side of East Johnson Street. Complete sidewalk construction at curb ramps at bumpout locations on south side of East Johnson Street.

Stage 5 Construction:
Place final surface layer of HMA pavement on East Johnson Street. Place permanent pavement markings.

Stage 6 Construction (Spring 2015):
Place Colored Crosswalks and Colored Bike Box Items. Complete any remaining finishing items, including seeding, sodding or any other work not completed in fall of 2014.

E. Contractor Obligations:
Revise standard spec 105.5.1 (5) Contractor Obligations as follows:

Employ a competent superintendent or designate a representative capable of reading and understanding the contract and experienced in the type of work being performed. The superintendent or designated representative shall be the authorized agent of the contractor and shall have full authority to execute the engineer's directions or instructions without delay. Ensure that the superintendent or designated representative is on the project or immediately accessible on site to the engineer during all hours of each work day. Notify the engineer promptly when replacing the superintendent or designated representative.

5. Traffic.

A General
Keep East Johnson Street open to through traffic at all times for the duration of this project except where noted below and in the Prosecution and Progress article in these special provisions.

The project includes temporary street lights and traffic signals. Maintain existing traffic signals and functionality of the lighting system during the project. Maintain existing traffic signals at each intersection until temporary traffic signals are in place and operating at that intersection. The City of Madison Traffic Engineering department will set timing of signals after the contractor has installed the temporary and permanent signals.

Place Portable Changeable Message Signs in locations as directed by the engineer one week prior to any street or lane closures.

Stage 1 Traffic:
Reduce East Johnson Street traffic to one lane of eastbound traffic on the south through lane.

Stage 2 Traffic:
Reduce East Johnson Street to one lane of eastbound traffic for the length of the project. Utilize the north curb lane for through traffic except where traffic shifts are required to stage construction at intersections.

Prohibit through traffic movements on North Baldwin Street.

Close south leg of North Livingston Street and North Few Street.

Maintain one lane of through traffic on North Franklin Street and North Blair Street.

Maintain two-way traffic on North Blount Street, North Paterson Street, North Brearly Street and North Ingersoll Street.

Stage construction at intersections as follows:

- Stage 2A:
  - Close the north leg of North Butler Street.
  - Close the south leg of North Butler Street.
  - Reduce North Hamilton Street to one lane southbound.
  - Close north leg of North Hancock Street.
  - Close south leg of North Baldwin Street.

- Stage 2B:
  - Reduce North Hamilton Street to one lane southbound.
  - Prohibit through traffic movements on North Hancock Street.
  - Close south leg of North Baldwin Street.

- Stage 2C:
  - Reduce North Hamilton Street to one lane southbound.
  - Prohibit through traffic movements on North Hancock Street.
  - Close south leg of North Baldwin Street.
  - Close south leg of North Hancock Street.

- Stage 2D:
  - Close south leg of North Butler Street.
  - Reduce North Hamilton Street to one lane southbound.

Stage 3 Traffic:
Reduce East Johnson Street to one lane of eastbound traffic for the length of the project. Utilize the south curb lane for through traffic.

Close north leg of North Hancock Street, North Livingston Street and North Few Street.

Stage 4 Traffic:
Reduce East Johnson Street to one lane of eastbound traffic for the length of the project. Utilize the north curb lane for through traffic.

Stage 5 Traffic:
Reduce East Johnson Street traffic to one lane of eastbound traffic in a moving operation.

Stage 5 Traffic:
Reduce East Johnson Street traffic to one lane of eastbound traffic in a moving operation.

Stage 6 Traffic:
Close one lane of East Johnson Street traffic using single lane closures. Close a lane on only one side of the East Johnson Street at a time. Notify City Traffic Engineering at least three working days prior to closure of any lane.

B Residential and Business Property Access
Alternate parking areas for businesses and residences along the project are very limited. Maintain access to properties along East Johnson Street for local residents and businesses. Maintain and keep open the access to all commercial driveways and parking lots where alternative access is not available at all times by closing one driveway at a time, building half the driveway at a time and/or plating concrete work. A commercial driveway is any driveway that serves any business or provides access to 4 or more parking spaces. Plating of concrete work, as directed by the engineer, is incidental to the item that is being plated.

Residential driveways may be closed for a maximum of 10 calendar days while the driveway is reconstructed.

Notify business owners and residents in writing at least 2 days (48 hours) prior to restricting access to any driveway. Notify residents in writing at least 3 days (72 hours) prior to closing any access to any driveway.

Provide emergency vehicles with adequate access to all properties along the project at all times.

Install temporary no parking signs to facilitate the traffic control plan and as necessary to complete the work within the contract. Contact John Villareal with the City of Madison Parking Utility at (608) 267-8756 to arrange for delivery of the temporary no parking signs, at least three working days prior to placing the signs. Post the signs in accordance to the City of Madison Police Department Guidelines for temporary no parking restrictions for construction or special events. The guidelines can be found at the link listed below. Obtaining and installing temporary no parking signings is incidental to the traffic control lump sum bid item.

http://www.cityofmadison.com/business/pw/documents/guidelines_temporarynoparkingrestrictions.pdf

C. Pedestrian Access
Maintain sidewalk at all times except under direction of the engineer. In areas of sidewalk construction, provide a temporary surface for pedestrian access at all times. The temporary surface shall meet Americans with Disabilities Act Accessibility Guidelines (ADAAG) requirements and shall consist of temporary asphaltic surface, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer.

Gravel or base course material is not acceptable. Maintain sidewalk access to all businesses and residences at all times. The Temporary Crosswalk/Sidewalk bid item is payment for maintaining crosswalks and sidewalks through the construction zone at signalized intersections.

Maintain pedestrian movements crossing the construction zone at all intersections at all times, unless otherwise directed by the engineer. Pedestrian crossings of intersections shall meet requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and shall consist of temporary asphaltic surface, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable. Maintain ADA accessible pedestrian walkways that are free from mud, sand, and construction debris. The Temporary Crosswalk/Sidewalk bid item is payment for maintaining crosswalks through the construction zone where existing crosswalks exist. Any closures of sidewalk shall be approved by the engineer and shall conform to the traffic control plan. At locations where crosswalks crossing East Johnson Street exist on both sides of the intersection, closure of one of the two crosswalks is permitted as long as all other crossings are completely open.

Maintain driveway access for special needs residents at all times. This includes the driveway for 1004 East Johnson Street and other driveways as designated by the city. Provide temporary driveway access or provide a designated parking location adjacent to the property. Plating of concrete work as directed by the engineer to accommodate special needs residents is incidental to the item being plated.

6. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.
107-065 (20080501)

There are underground and overhead utility facilities located within the project limits. There are known utility adjustments required for the construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground facilities and maintain code clearance from overhead facilities at all times. Adjustments in the location of certain described items may be necessary, as directed by the engineer, when it becomes evident that a utility conflict could occur.

Abandoned facilities exist within the project limits and utility companies will be abandoning some additional facilities in place after relocating facilities to avoid conflicts with the proposed work. Removal by the contractor of any abandoned facilities necessary to complete the proposed work, including plugging the remaining ends of the facility, is considered incidental to the contract. Contact each utility company individually to verify if any abandoned facilities can be expected.

Prospective bidders are cautioned that the arrangements set forth in this Article represent the utility companies' best estimate of their plans to relocate and/or adjust conflicting

facilities. Frequently, the utility companies encounter problems that prevent them from meeting their anticipated schedules.

A utility coordination meeting will be held before the preconstruction meeting. The meeting will be held to coordinate proposed private utility installation with the contractor's work. Several private utility companies will be installing new facilities in a joint trench in conjunction with the project. The proposed work by the private utilities will be performed by others and is detailed in the "Private Utility Plan" section of construction plans. The contractor's superintendent or designated representative will attend the utility coordination meeting.

Utility Coordination Meetings will be held once a week by the engineer. The contractor's superintendent or designated representative will attend and provide a written schedule of the next week(s)' operations.

American Transmission Company (ATC)
ATC maintains two parallel underground 69kV transmission lines along the south side of East Johnson Street from North Hamilton Street to North Blount Street. The underground facility completes a 90 degree sweep from East Johnson Street heading south on North Blount Street. The existing lines are two 8-inch steel pipes with concrete encasement.

Contact Chris Hanshaw, (608) 877-3636, of ATC a minimum of one week prior to any excavation activities greater than 24 inches deep and within 3 feet of existing ATC facilities. ATC will determine if inspection is necessary by ATC staff.

Horizontal and vertical clearances as listed below are required. A lesser clearance may be acceptable with the approval of ATC of an adequately designed insulation barrier and/or additional fluid thermal backfill to isolate/dissipate heat from the adjacent heat producing utility.

Table 1 – Horizontal or Parallel Clearances from Cable System to Other Utilities or Structures

Utility or Structure	Clearances (feet)		
	Preferred Design	Minimum Design	Minimum Acceptable
Gas, Distribution Main or Service	2	1	1
Storm or Sanitary Sewer	2	1	1
Water Main or Service	2	1.5	1
Electric Ducts	10	10	10
Communication and Other Ducts	2	1	1
Manholes	2	1	1
Other Structures or Foundations	2	1.5	1

Table 2 – Vertical or Crossing Clearances from Cable System to Other Utilities or Structures

Utility or Structure	Clearances (feet)		
	Preferred Design	Minimum Design	Minimum Acceptable
Gas Distribution Main or Service	2	1	1
Storm or Sanitary Sewer	2	1	0.5
Water Service	2	1	0.25[3]
Water Main	2	1.5	0.5
Electric Ducts	4	2	1.5
Communication and Other Ducts	2	1	0.25[4]
Manholes (under ATC cable)	2	1	1
Grade	3.5	3	2[6]

[3] For water service of 2" or less in size. For water service larger than 2" maintain at least 0.5 foot Minimum Acceptable clearance

[4] Separation shall include a minimum of 3" of concrete, via encasement and/or barrier between the facilities.

[6] Galvanized Steel Plate required if less than 2.5 foot.

Place fluid thermal backfill at all storm sewer, sanitary sewer and water main crossings of the existing ATC line. Thermal backfill placed for utility crossings will be paid under bid item, SPV.0060.021, Fluid Thermal Backfill.

Manhole adjustment by ATC will be needed at approximately Station 15+50 right. A minimum of one week notice is required for adjustment.

Prior to construction, ATC will install an 8-inch steel transmission line at the intersection of North Livingston Street west to approximately Station 33+25. Details of this proposed work are shown in "Private Utility Plan" section of construction plan. ATC facilities will be installed below proposed sewer and water underground utilities.

In conjunction with the project, ATC will be installing an 8-inch steel transmission line in a joint trench with other private utilities, from North Butler Street to approximately Station 33+25 within the north parking lane of East Johnson Street. Details of this proposed work and a cross section of the proposed joint trench are shown in "Private Utility Plan" section of construction plan. This proposed work will be accomplished by others and will take place during various construction stages. The proposed work by ATC from Station 10+60 to Station 14+60 will take place during construction stages 2A and 2B. The proposed work by ATC from Station 14+60 to Station 33+25 will take place during construction stage 3.

This work requires the contractor to complete all underground utility installation within one city block prior to ATC work beginning. Remove all equipment and stockpiles from the city block for ATC to expedite completion of installation, welding, testing and

backfilling of ATC's new facilities. The work proposed by ATC and other private utilities from North Butler Street to North Livingston Street is estimated to be completed in ten weeks. Time required for construction of the work proposed by ATC and other private utilities will vary from one to four weeks per block.

AT&T Transmission (Fiber Optic).
AT&T Transmission, also known as AT&T Legacy, maintains an underground fiber optic line along the south side of East Johnson Street from North Butler Street to North Blair Street. This line is in an abandon gas main pipe. AT&T Transmission also maintains an underground fiber optic cable joint package with the Wisconsin Department of Transportation (WisDOT) crossing East Johnson Street at North Brearly Street (Station 46+90). The package is (6) 2-inch HDPE conducts approximately 5-feet deep.

No facility adjustments are anticipated.

AT&T Wisconsin (Telecommunications).
AT&T Wisconsin, formerly SBC, maintains underground cable along the north side of East Johnson Street from North Hancock Street to approximately Station 24+75, crossing East Johnson Street at North Brearly Street (Station 47+50), along the north side of East Johnson Street from Station 59+05 to Station 63+00, 3 crossings on East Johnson Street at North Few Street (Station 60+65), and along the south side of East Johnson Street from North Few Street to Station 60+95. Estimated depth of AT&T Wisconsin buried facilities is 36-inches.

AT&T Wisconsin also maintains aerial facilities crossing East Johnson Street at Station 12+90, along the north side of East Johnson Street from Station 24+75 to Station 25+75, crossing East Johnson Street at North Livingston Street, along the north side of East Johnson Street from North Paterson Street to North Ingersoll Street, and along the south side of East Johnson Street from Station 61+45 to Station 65+80.

AT&T relocation includes new buried cable along the south side of East Johnson Street from North Butler to a proposed street crossing at Station 12+90, along the north side of East Johnson Street from North Franklin Street to Station 19+70, along the north side of East Johnson Street from North Blair Street to Station 25+75, and along the north side of East Johnson Street from North Paterson Street to Station 44+50. Additional work includes the relocation of the existing duct package crossing East Johnson Street at Station 20+90 to avoid proposed utilities. AT&T will place two new 4-inch PVC conduits crossing East Johnson Street at Station 22+90 after the proposed electrical structure is placed by others at that crossing location. AT&T will also remove and replace utility poles within the street clear zone. All work will be completed prior to construction.

Centurylink (Lightcore) (Fiber Optic)
Centurylink maintains fiber optic cables crossing East Johnson Street at North Butler Street and along the south side of East Johnson Street from North Few Street to North Baldwin Street. At both locations the facilities are two 1.5-inch no flexible HDPE ducts with a fiber optic cable in each duct.

No facility adjustments are anticipated.

Charter Communications (Telecommunications)
Charter Communications maintains an overhead cable line along the south side and aerial service crossings along the entire length of East Johnson Street. Charter Communications facilities are located on MG&E utility poles.

Charter Communications will adjust overhead facilities to maintain traffic signal and street light clearance. This work will be completed prior to the start of construction.

Charter Communications will install underground 4-inch and 2-inch conduit within the private utility joint trench from North Butler Street to North Baldwin Street in conjunction with the project. All work will be completed during the same time frame that other private utility facilities are installed. From North Butler Street to North Livingston Street, the conduit will be installed directly above the MG&E concrete encased duct package. Details of this proposed work are shown in "Private Utility Plan" section of construction plan.

City of Madison Water Utility
The City of Madison has underground water facilities running throughout the project limits. Replace water main and lateral facilities, and abandon old water main within the project limits under this contract as shown in the plans.

Complete water main replacement, including laterals, prior to the installation of the proposed private utility facilities by others in the joint trench installation described above.

City of Madison Engineering (sanitary sewer)
The City of Madison has underground sewer facilities running the entire length of the project limits. Replace sewer main and lateral facilities within the project limits under this contract as shown in the plans.

Complete sanitary sewer replacement, including laterals, prior to the installation of the proposed private utility facilities by others in the joint trench installation described above.

City of Madison Traffic Engineering (traffic signals and street lights)
The city of Madison has underground signal and lighting facilities the entire length of the project limits. Existing traffic signals to be upgraded are at North Hamilton Street/North Butler Street, North Blount Street, North Paterson Street, North Ingersoll Street and East Gorham Street/North Baldwin Street. The city also has street lights on both sides of East Johnson Street the entire length of the project. Replace traffic signals and street lighting facilities within the project limits under this contract as shown in the plans.

Madison Gas & Electric (gas)
Madison Gas & Electric maintains an underground gas distribution system the entire length of the project. A 4-inch steel gas main runs on both sides of East Johnson Street

from North Hamilton Street to North Hancock Street. A 4-inch steel gas main runs on the south side of East Johnson Street from North Hancock Street to North Few Street connecting to an 8-inch gas main crossing East Johnson Street at Station 60+60. A 2-inch steel gas main runs on the north side of East Johnson Street from North Hancock Street to North Brearly Street connecting to a 4-inch steel gas main crossing East Johnson Street at Station 47+45. A 8-inch steel gas main connecting to an 8-inch steel gas main North Few Street runs along the north side of East Johnson Street to Station 63+55. At Station 63+55, 6-inch steel gas main crosses East Johnson Street and runs along the south side of East Johnson Street to North Baldwin Street. An 8-inch steel gas main continues from Station 63+55 on the north side of East Johnson Street to a connection to an 8-inch steel gas main at Station 66+95 (North Baldwin Street).

Numerous potential conflicts exists between the gas lines and proposed storm sewer facilities. Utilize Utility Line Openings (ULO) as early in the project as possible to identify conflicts.

MG&E will only be adjusting their facilities where the gas lines actually conflict with the project work. Provide MG&E 7 days notice of conflicts to accommodate one calls and scheduling as MG&E anticipates 4 days to relocate each line greater than or equal to 4-inch size and 2 days for 2-inch size. All adjustments will be done during construction.

Prior to construction, MG&E will install a 12-inch steel gas distribution line at the intersection of North Livingston Street west to approximately Station 33+25. Details of proposed work are shown in “Private Utility Plan” section of construction plan. MG&E gas facilities will be installed below proposed sewer and water underground utilities.

In conjunction with the project, MG&E will be installing a 12-inch steel gas distribution line in a joint trench with other private utilities, from North Butler Street to approximately Station 33+25 within the north parking lane of East Johnson Street within the north parking lane of East Johnson Street. Details of this proposed work and a cross section of the proposed joint trench are shown in “Private Utility Plan” section of construction plan. This proposed work will be accomplished by others and will take place during various construction stages. The proposed work by MG&E from Station 10+60 to Station 14+60 will take place during construction stages 2A and 2B. The proposed work by MG&E from Station 14+60 to Station 33+25 will take place during construction stage 3.

This work requires the contractor to complete all underground utility installation within one city block prior to MG&E work beginning. Remove all equipment and stockpiles from the city block for MG&E to expedite completion of installation, welding, testing and backfilling of MG&E’s new facilities. The work proposed by MG&E and other private utilities from North Butler Street to North Livingston Street is estimated to be completed in 10 weeks. Time required for construction of the work proposed by MG&E and other private utilities will vary from one to four weeks per block.

Madison Gas & Electric (electric)
Madison Gas & Electric maintains an overhead electric distribution system the entire length of the project, a concrete encased 9 duct package under the sidewalk on North Hamilton Street (east side) north of East Johnson Street, a concrete encased 12 duct package stubbed to East Johnson Street at North Blair Street (Station 20+90), a concrete encased 10 duct package crossing East Johnson Street at North Franklin Street (Station 17+20) and a concrete encased 12 duct package crossing East Johnson Street at North Blount Street (Station 27+25).

Relocation of existing utility poles in conflict with proposed utilities between North Blair Street and North Baldwin will be accomplished during construction. Existing poles between North Butler to North Blair will remain in place during construction and will be removed upon the individual property owner's electric service entrance equipment being in compliance with the City of Madison's Undergrounding District Request. Existing duct package relocation at North Franklin Street, North Blair Street, and North Blount Street will be completed during the project along with manhole adjustment. Utilize Utility Line Openings (ULO) as early in the project as possible to coordinate MG&E relocation required. The crossing relocates will require 10 days at each requested location.

Prior to construction, MG&E will install a new concrete encased duct at the intersection of North Livingston Street west to approximately Station 33+25, excluding the proposed MG&E manhole. Details of proposed work are shown in "Private Utility Plan" section of construction plan. MG&E facilities will be installed below proposed sewer and water underground utilities.

In conjunction with the project, MG&E will be installing a new concrete encased duct package in a joint trench with other private utilities, from North Butler Street to approximately Station 33+25 including the manhole at Station 33+75 within the north parking lane of East Johnson Street. Details of this proposed work and a cross section of the proposed joint trench are shown in "Private Utility Plan" section of construction plan. This proposed work will be accomplished by others and will take place during various construction stages. The proposed work by MG&E from Station 10+60 to Station 14+60 will take place during construction stages 2A and 2B. The proposed work by MG&E from Station 14+60 to Station 33+25 will take place during construction stage 3.

This work requires the contractor to complete all underground utility installation within one city block prior to MG&E work beginning. Remove all equipment and stockpiles from the city block for MG&E to expedite completion of installation, welding, testing and backfilling of MG&E's new facilities. The work proposed by MG&E and other private utilities from North Butler Street to North Livingston Street is estimated to be completed in ten weeks. Time required for construction of the work proposed by MG&E and other private utilities will vary from one to four weeks per block.

The non-concrete encased PVC installed between North Livingston Street and North Baldwin Street will require a clear trench route by the contractor and one week per block for installation.

WisDOT (fiber optic)
The Wisconsin Department of Transportation maintains an underground fiber optic cable joint package with AT&T Transmission crossing East Johnson Street at North Brearly Street (Station 46+90). The package is (6) 2-inch HDPE conduits.

No facility adjustments are anticipated.

7. Hauling Restrictions.

Conduct operations in a manner that will cause a minimum of inconvenience to the free flow of traffic on roadways carrying East Johnson Street traffic at all times.

Use City of Madison designated truck routes for material haul roads as detailed in standard spec 618.

Equip all vehicles traveling on public roads, hauling materials or removals that are subject to spillage, by either wind or vibration, with tailgates and adequate sideboards. Use canvas covers and any other protective devices to prevent spillage as determined necessary by the engineer. Comply with all local ordinances.

8. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 7:00 PM until the following 7:00 AM, Monday through Saturday and from 7:00 PM on Saturdays until the following 10:00 AM on Sundays, unless prior written approval is obtained from the engineer.
107-001 (20060512)

9. Notice to Contractor – Potential Contamination Beyond Construction Limits.

The City of Madison completed testing for soil and ground water contamination for locations within this project where excavation is required. Testing indicated that potentially petroleum-contaminated soil may be present at the following site(s):

- Station 11+60 to Station 12+40, 33 feet right. Former gas station location adjacent to project limits. No contaminated soil detected within the right-of-way.
- Station 23+10 to Station 23+76, 33 feet left. Closed residential LUST site adjacent to project limits. No contaminated soil detected within the right-of-way.
- Station 35+30 to Station 36+15, 33 feet right. Closed commercial and residential LUST site adjacent to project limits. No contaminated soil detected within the right-of-way.

- Station 41+25 to Station 41+70, 5 feet left to 33 feet left, Former dry cleaning location. Potential solvent contamination 10 feet below ground surface. Not to be disturbed, below limit of excavation.
- Station 42+59 to Station 43+75, 33 feet left. Former dry cleaning sites adjacent to project limits. No contaminated soil detected within the right-of-way.
- Station 65+75 to Station 66+25, 33 feet right. Former dry cleaning site adjacent to project limits. No contaminated soil detected within the right-of-way.

The contaminated soils at the above sites are expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations at these locations to ensure that they do not extend beyond the excavation limits indicated in the plans. If contaminated soils are encountered at these sites or elsewhere on the project during excavation, terminate excavation in the area and notify the engineer.

The Hazardous Materials Report is available by contacting:

Scott LaCoursiere
OTIE, LLC
5100 Eastpark Boulevard, Suite 200
Madison, WI 53718
(608) 243-6471
SLaCoursiere@otie.com

10. Coordination with Businesses.

The contractor shall arrange and conduct meetings between the engineer, local officials, business people, and property owners to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting prior to the start of work under this contract and hold two meetings per month thereafter.
108-060 (20030820)

11. Municipality Acceptance of Sanitary Sewer and Water Main Construction.

Both the department and City of Madison personnel will inspect construction of sanitary sewer and water main under this contract. However, testing and final acceptance of the sanitary sewer and water main construction will be by the City of Madison.
105-001 (20061009)

12. Signing, Removing Signs and Removing Small Sign Supports.

The City of Madison Traffic Engineering Division will remove existing City of Madison signs and sign supports, except for overhead signs and overhead sign supports. Contact Phil Nehmer, City of Madison Traffic Engineering at (608) 267-1960 at least five calendar days prior to starting construction to arrange to have signs removed. Small sign

support bases are to be removed and disposed of by the contractor. Removal of small sign support bases is incidental to the Bid Item – Common Excavation.

After installation of permanent signs has been completed, the City of Madison Traffic Engineering Division will mark curb locations to be painted under Bid Item – Pavement Marking Curb Epoxy.

13. Preservation of Existing Trees.

Tree preservation is of great importance on the project. Take precautions during construction so as not to disfigure, scar, or impair the health of any tree on public or private property that is not marked for removal. Do not place, park, or store on the surface of any unpaved areas within the drip lines of trees any equipment, vehicles, or materials. Do not deposit any chemicals, rinsates, or petroleum products within the drip lines of trees. The drip line is defined as the outermost extent of the tree canopy, extended vertically to the ground surface.

Preconstruction Pruning
Trees larger than 10 inches DBH will be pruned by City Forestry to an approximate height of 14 feet above the road wherever construction equipment is expected to invade the tree crown. Pruning will be done according to ANSI A300 tree pruning specifications. Protect all remaining limbs from damage by construction equipment.

Excavations
Do not rip or pull roots out towards the trunk of a tree while excavating. The use of an excavator, backhoe, or loader to cut roots is not acceptable. Immediately cut damaged roots over 1/2-inch in diameter in back of the damaged section. Make cuts with an ax, lopping shears, chainsaw, stump grinder, or other means that will produce a clean cut. Cover any exposed roots as soon as excavation and installation are complete. Root pruning will be paid under the item Root Pruning Existing Terrace Trees, Item SPV.0060.004.

Underground Utility Excavation and Installation
Do not grade, excavate, or disturb the area within 5 feet of any tree measured from the outside edge of the tree at DBH (Diameter Breast Height) along the length of the terrace, without permission from the City Forestry Representative.

The engineer and the City Forestry Representative will review laterals that are in close proximity to terrace trees on a case by case basis. The engineer may elect to terminate lateral or service installation prior to conflict with tree roots (i.e. at the curb line). For laterals that continue to the property line, use construction methods that minimize tree damage as directed by the engineer. The engineer may allow boring under or within the 5 feet protection zone.

Curb and Gutter Removal and Replacement
Provide extra care to root masses that grow very close to, up to or over the curb during excavation. The City Forestry marks "NRC" (No Root Cutting) next to trees with roots that could be damaged in curb removal.

Sidewalk Removal and Replacement
Provide extra care to root masses that grow very close to the sidewalk during excavation. The City Forestry marks "NRC" (No Root Cutting) next to trees with roots that could be damaged in sidewalk removal.

Terrace Restoration
Do not mechanically grade within 5 feet of any tree. If in the root protection zone, grade with hand implements in a manner that will minimize damage to the root system.

Damages
Failure to follow the proper safeguards of this specification, or the Root Pruning Existing Terrace Trees Bid Item will result in the following cost recovery charges and liquidated damages assessed against the contractor:

Where construction damage occurs causing or resulting in removal of the tree, the following damages will be assessed against the contractor:

- The costs associated with removing the tree including wood disposal.
- The costs associated with removing the stump to a depth of at least 24 inches below the ground.
- The costs associated with replanting a replacement tree that is balled and burlapped and a minimum caliper diameter of 3 inches. The species and replanting location will be determined by the City Forestry.
- The value of the existing tree which will equal $125.00 per trunk diameter inch, measured at 4.5 feet above ground.

For bark scraping and broken branches the following damages will be assessed against the contractor:

- The costs associated with pruning broken branches, including wood disposal.
- Loss of limb or broken branch larger than 3 inches in diameter: $150.00 for each occurrence. Breakage of limbs that are less than 14 feet above the roadway shall be reviewed on a case by case basis.
- Damage to trunk or bark larger than one square foot in area: $400.00 each area.

For root cutting or excavation within the root protection zone the following damages will be assessed against the contractor:

- For mechanical excavation within 5 feet of a tree, along the length of the terrace or sidewalk of the tree, including ripping of roots back towards the trunk, without prior permission from City Forestry Representative: $150.00 for each occurrence.
- For mechanical excavation beyond 6 inches or 1 foot of the proposed curb installation, as determined by the size of the existing tree and terrace width, including ripping of roots back towards the trunk: $150.00 for each occurrence.

14. Abandoning Sewer, Item 204.0291.S.

A Description
This special provision describes abandoning existing sewer by filling it with cellular concrete according to the pertinent requirements of standard spec 204 and standard spec 501, as shown in the plans, and as hereinafter provided.

B Materials
Provide cellular concrete meeting the following specifications: 1 part cement, 1 part fly ash, 8 parts sand, or an approved equal, and water. Provide cement meeting the requirements of standard spec 501.2.1 for Type 1 Portland Cement. Provide sand meeting the requirements of standard spec 501.2.5.3. Provide water meeting the requirements of standard spec 501.2.4.

C Construction
Fill the abandoned sewer pipe with cellular concrete as directed by the engineer. In the event that the sewer cannot be completely filled from existing manholes, tap the sewer where necessary and fill from these locations.

D Measurement
The department will measure Abandoning Sewer in volume by the cubic yard according to standard spec 109.1.3.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
204.0291.S	Abandoning Sewer	CY

Payment is full compensation for furnishing all materials and excavating and backfilling where necessary.
204-050 (20080902)

15. Excavation, Hauling and Disposal of Contaminated Soil, Item 205.0501.S.

A Description
A.1. General
This special provision describes excavating, loading, hauling, and disposing of contaminated soil at a DNR approved facility. This provision addresses both petroleum-contaminated soil and non-petroleum-contaminated soil. Based on field testing, only petroleum-contaminated soil is expected. Petroleum-contaminated soil must be disposed of at a DNR approved bioremediation facility. The closest DNR-approved landfills which include bioremediation facilities are listed below, another WDNR-approved facility may be proposed:

Waste Management Madison Prairie Landfill
3490 Nelson Road
Sun Prairie, WI 53590
(608) 837-9031
Contact: Tim Nelson (608) 535-3011

Waste Management Deer Track Park Landfill
N6756 Waldmann Lane
Farmington, WI 53094
(608) 837-9031
Contact: Tim Nelson (608) 535-3011

Perform this work in accordance to the requirements ofstandard spec205 and with pertinent parts of chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

A.2. Notice to the Contractor – Contaminated Soil Locations

The city completed testing for soil contamination for locations within this project where excavation is required. Testing indicated that contaminated soil is present at the following locations as shown on the construction plan set:

- South 25 feet of East Johnson Street (Station 26+35 – Station 27+40) within the roadway including 20 feet of the southeast quadrant of North Blount Street (petroleum contamination).
- North 25 feet of East Johnson Street (Station 32+82 – Station 34+27) within the roadway including 40 feet north on North Livingston Street (petroleum contamination).
- North 35 feet of East Johnson Street (Station 39+80 – Station 40+75) within the roadway (petroleum contamination).

If contaminated soils—based on unusual odor, presence of cinders, staining, etc.—are encountered elsewhere on the project, terminate excavation activities in the area and notify the Environmental Consultant and engineer.

For a copy of the Phase 2 and 2.5 Subsurface Investigation Reports and analytical results, and/or further information regarding previous investigation and remediation activities at these sites contact:

Scott LaCoursiere
OTIE, LLC
5100 Eastpark Boulevard, Suite 200
Madison, WI 53718
(608) 243-6471
SLaCoursiere@otie.com

A.3. Coordination

Coordinate work under this contract with the City of Madison Environmental Consultant. The limits of soil to be excavated are based on the results of the Phase 2 and 2.5 Subsurface Investigation Reports, as shown on the construction plan sets.

The contact for the City of Madison Environmental Consultant is:

Brynn Bemis
City of Madison Engineering
210 Martin Luther King, Jr. Blvd., Rm 115
Madison, WI 53703
(608) 267-1986
bbemis@cityofmadison.com

The role of the Environmental Consultant will be limited to:

- Determining the location and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and/or field screening instruments.
- Identifying contaminated soils to be hauled to the approved disposal facility.
- Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein.
- Providing required analytical reports to the approved disposal facility to assist with proper profiling. The City of Madison is to be listed as the waste generator.

The City of Madison will provide an Environmental Consultant (staff member or hired consultant) should contaminated material be discovered. Contact Brynn Bemis, City of Madison Engineering Department at (608) 267-1986 to coordinate the onsite activities and testing.

At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the Environmental Consultant. Also notify the Environmental Consultant at least 3 calendar days prior to commencement of excavation activities in each of the contaminated areas.

Identify the approved landfill that will be used for disposal of contaminated soils, coordinate forms and paperwork, and provide this information to the Environmental Consultant no later than 14 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. Do not transport contaminated soil offsite without prior approval from the Environmental Consultant.

A.4. Health and Safety Requirements
Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter soil contaminated with petroleum contamination. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction
Supplement standard spec 205.3 with the following:

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated.

The Environmental Consultant will periodically evaluate soil excavated from the contaminated area to determine if the soil will require offsite bioremediation. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment.

While excavating, only excavate contaminated soils as required by the construction plan set. Do not over-excavate contaminated soils, unless directed by the Environmental Consultant or engineer.

Directly load and haul soils designated in the construction plan set or by the Environmental Consultant for offsite landfill. Excavated contaminated soils may be temporarily stockpiled on site for no more than 24 hours. WDNR stockpile requirements for contaminated materials are specified in NR 718.05. Place contaminated soil on base material impervious to the contaminant and to water, such as concrete, asphalt, or plastic sheeting. Cover piles with impervious material, such as plastic sheeting, to prevent infiltration of precipitation and to inhibit volatilization of soil contaminants.

Use loading and hauling practices that are appropriate to prevent any spills or releases of contaminated soils or residues. If spills or releases occur, immediately notify the Environmental Consultant and engineer. Immediately recover all contaminated soil, residue, and any new contamination that was caused by the spill or release. Prior to

transport, sufficiently dewater soils designated for off-site disposal so as not to contain free liquids.

Dispose of petroleum-contaminated soil at the approved facility's bioremediation facility. Dispose of non-petroleum-contaminated soil as general fill at the facility.

D Measurement

Excavation, Hauling and Disposal of Contaminated Soil will be measured in tons of contaminated soil accepted by the approved landfill as documented by weight tickets generated by the landfill.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
205.0501.S	Excavation, Hauling and Disposal of Contaminated Soil	TON

Payment is full compensation for contaminated soil excavation, segregation, hauling, and disposal and any associated landfill taxes and fees; assistance with soil sampling; dewatering soil prior to transport; temporary stockpiling; replacement fill material; weighing of trucks; obtaining weight tickets from scale attendant; providing original copies of weight tickets to the engineer and the Environmental Consultant; arranging to have certificate of soil treatment submitted to the engineer and the Environmental Consultant; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

16. QMP Base Aggregate.

A. Description

A.1. General

(1) This special provision describes contractor quality control (QC) sampling and testing for base aggregates, documenting those test results, and documenting related production and placement process changes. This special provision also describes department quality verification (QV), independent assurance (IA), and dispute resolution.

(2) Conform to standard spec 301, 305, and 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.

(3) Do not apply this special provision to material placed under the Aggregate Detours, Salvaged Asphaltic Pavement Base, Breaker Run, Select Crushed, Pit Run, Subbase, or Riprap bid items.

(4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:

1. Production and placement control and inspection.
2. Material sampling and testing.

(5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's website at: http://roadwaystandards.dot.wi.gov/standards/cmm.

A.2. Contractor Testing for Small Quantities

(1) The department defines a small quantity, for each individual Base Aggregate bid item, as a plan quantity of 9000 tons or less of material as shown in the schedule of items under that bid item.

(2) The requirements under this special provision apply equally to a small quantity for an individual bid item except as follows:

1. The contractor need not submit a full quality control plan but shall provide an organizational chart to the engineer including names, telephone numbers, and current certifications of all persons involved in the quality control program for material under affected bid items.
2. Divide the aggregate into uniformly sized sublots for testing as follows:

Plan Quantity	**Minimum Required Testing**
≤ 1500 tons	One test from production, load-out, or placement at the contractor's option[1]
> 1500 tons and ≤ 6000 tons	Two tests of the same type, either from production, load-out, or placement at the contractor's option[1]
> 6000 tons and ≤ 9000 tons	Three placement tests[1,3]

[1] If using production tests for acceptance, submit test results to the engineer for review prior to incorporating the material into the work. Production test results are valid for a period of 3 years.
[2] For 3-inch material, obtain samples at load-out.
[3] If the actual quantity overruns 9000 tons, create overrun sublots to test at a rate of one additional placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

3. No control charts are required. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Department verification testing is optional for quantities of 6000 tons or less.

(3) Material represented by a sublot with any property outside the specification limits is nonconforming. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B. Materials

B.1. Quality Control Plan

(1) Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not place base before the engineer reviews and comments on the plan. Construct the project as that plan provides.

(2) Do not change the quality control plan without the engineer's review. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in each of the contractor's laboratories as changes are adopted. Ensure that the plan provides the following elements:

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.
5. Descriptions of stockpiling and hauling methods.
6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

B.2. Personnel

(1) Have personnel certified under the department's highway technician certification program (HTCP) perform sampling, testing, and documentation as follows:

Required Certification Level:	**Sampling or Testing Roles:**
Aggregate Technician IPP Aggregate Sampling Technician Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Sampling[1]
Aggregate Technician IPP Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Gradation Testing, Aggregate Fractured Particle Testing, Aggregate Liquid Limit and Plasticity Index Testing

[1] Plant personnel under the direct observation of an aggregate technician certified at level one or higher may operate equipment to obtain samples.

(2) A certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

B.3 Laboratory

(1) Perform QC testing at a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Management Section
3502 Kinsman Blvd.
Madison, WI 53704
Telephone: 608-246-5388

http://www.dot.state.wi.us/business/engrserv/lab-qualification.htm

B.4 Quality Control Documentation

B.4.1 General

(1) Submit base aggregate placement documentation to the engineer within 10 business days after completing base placement. Ensure that the submittal is complete, neatly organized, and includes applicable project records and control charts.

B.4.2 Records

(1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

B.4.3 Control Charts

(1) Plot gradation and fracture on the appropriate control chart as soon as test results are available. Format control charts according to CMM 8.30. Include the project number on base placement control charts. Maintain separate control charts for each base aggregate size, source or classification, and type.

(2) Provide control charts to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:

1. Contractor individual QC tests.
2. Department QV tests.
3. Department IA tests.
4. Four-point running average of the QC tests.

(3) Except as specified under B.8.2.1 for nonconforming QV tests, include only QC tests in the running average. The contractor may plot process control or informational tests on control charts, but do not include these tests, conforming QV tests, or IA tests in the running average.

B.5 Contractor Testing

(1) Test gradation, fracture, liquid limit and plasticity index during placement for each base aggregate size, source or classification, and type.

(2) Test gradation once per 3000 tons of material placed. Determine random sample locations and provide those sample locations to the engineer. Obtain samples after the material has been bladed, mixed, and shaped but before compacting; except collect 3-inch samples from the stockpile at load-out. Do not sample from material used to maintain local traffic or from areas of temporary base that will not have an overlying pavement. On days when placing only material used to maintain local traffic or only temporary base that will not have an overlying pavement, no placement testing is required.

(3) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.

(4) The engineer may require additional sampling and testing to evaluate suspect material or the technician's sampling and testing procedures.

(5) Test fracture for each gradation test until the fracture running average is above the lower warning limit. Subsequently, the contractor may reduce the frequency to one test per 10 gradation tests if the fracture running average remains above the warning limit.

(6) Test the liquid limit and plasticity index for the first gradation test. Subsequently, test the liquid limit and plasticity index a minimum of once per 10 gradation tests.

B.6 Test Methods

B.6.1 Gradation

(1) Test gradation using a washed analysis conforming to the following as modified in CMM 8.60:

Gradation	AASHTO T 27
Material finer than the No. 200 sieve	AASHTO T 11

(2) For 3-inch base, if 3 consecutive running average points for the percent passing the No. 200 sieve are 8.5 percent or less, the contractor may use an unwashed analysis. Wash at least one sample out of 10. If a single running average for the percent passing the No. 200 sieve exceeds 8.5 percent, resume washed analyses until 3 consecutive running average points are again 8.5 percent passing or less.

(3) Maintain a separate control chart for each sieve size specified in standard spec 305 or 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:

1. Control limits are at the upper and lower specification limits.
2. There are no upper warning limits for sieves allowing 100 percent passing and no lower control limits for sieves allowing 0 percent passing.
3. Dense graded warning limits, except for the No. 200 sieve, are 2 percent within the upper and lower control limits. Warning limits for the No. 200 sieve are set 0.5 percent within the upper and lower control limits.
4. Open graded warning limits for the 1-inch, 3/8-inch, and No. 4 sieves are 2 percent within the upper and lower control limits. Upper warning limits for the No. 10, No. 40, and No. 200 sieves are 1 percent inside the upper control limit.

B.6.2 Fracture

(1) Test fracture conforming to CMM 8.60. The engineer will waive fractured particle testing on quarried stone.

(2) Maintain a separate fracture control chart for each base aggregate size, source or classification, and type. Set the lower control limit at the contract specification limit, either specified in another special provision or in table 301-2 of standard spec 301.2.4.5. Set the lower warning limit 2 percent above the lower control limit. There are no upper limits.

B.6.3 Liquid Limit and Plasticity

(1) Test the liquid limit and plasticity according to AASHTO T 89 and T 90.

(2) Ensure the material conforms to the limits specified in standard spec table 301-2.

B.7 Corrective Action

B.7.1 General

(1) Consider corrective action when the running average trends toward a warning limit. Take corrective action if an individual test exceeds the contract specification limit. Document all corrective actions both in the project records and on the appropriate control chart.

B.7.2 Placement Corrective Action

(1) Do not blend additional material on the roadbed to correct gradation problems.

(2) Notify the engineer whenever the running average exceeds a warning limit. When 2 consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:

1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
2. For fracture, increase the QC testing frequency to at least one test per gradation test.

(3) If corrective action improves the property in question such that the running average after 4 additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after 4 additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.

(4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.

(5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:

1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
3. The fracture control limit is exceeded by more than 10.0 percent.

B.8 Department Testing

B.8.1 General

(1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within 2 business days after the department obtains the sample.

B.8.2 Verification Testing

B.8.2.1 General

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:
1. One non-random test on the first day of placement.
2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.

(3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV samples after the material has been bladed, mixed, and shaped but before compacting; except, for 3-inch aggregates, the department will collect samples from the stockpile at load-out. The department will split each sample, test half for QV, and retain half.

(4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

B.8.3 Independent Assurance

(1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform

an IA review according to the department's independent assurance program. That review may include one or more of the following:

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in B.9.

B.9 Dispute Resolution

(1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.

(2) Production test results, and results from other process control testing, may be considered when resolving a dispute.

(3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C. (Vacant)

D. (Vacant)

E. Payment

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to this work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the non-performance of QMP administrative item.

(2) For material represented by a running average exceeding a control limit, the department will reduce pay by 10 percent of the contract price for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

301-010 (20100709)

17. QMP Ride; Incentive IRI Ride, Item 440.4410.S.

A Description

1. This special provision describes profiling pavements with a non-contact profiler, locating areas of localized roughness, and determining the International Roughness Index (IRI) for each wheel path segment.
2. Profile the final riding surface of all mainline pavement. Include auxiliary lanes in Category I and II segments; crossroads with county, state or U.S. highway designations greater than 1500 feet in continuous length; bridges, bridge approaches; and railroad crossings. Exclude roundabouts and pavement within 150 feet of the points of curvature of roundabout intersections.
3. The engineer may direct straightening under standard spec 415.3.10 for pavement excluded from localized roughness under C.5.2 (1); for bridges; and for roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections.

Other surfaces being tested under this provision are exempt from straightening requirements.

B (Vacant)

C (Construction)

C.1 Quality Control Plan

1. Submit a written quality control plan to the engineer at or before the pre-construction conference. Ensure that the plan provides the following elements:
2. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of all quality control personnel.
3. The process by which quality control information and corrective action efforts will be disseminated to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
4. The methods and timing used for monitoring and/or testing ride quality throughout the paving process. Also indicate the approximate timing of acceptance testing in relation to the paving operations.
5. The segment locations of each profile run used for acceptance testing.

Traffic Control Plan

C.2 Personnel

Have a profiler operator, certified under the department's highway technician certification program (HTCP), operate the equipment, collect the required data, and analyze the results using the methods taught in the HTCP profiling course. Ensure that an HTCP-certified profiler operator supervises data entry into the material records system (MRS).

C. Equipment

1. Furnish a profile-measuring device capable of measuring IRI from the list of department-approved devices published on the department's web site: http://roadwaystandards.dot.wi.gov/standards/qmp.
2. Unless the engineer and contractor mutually agree otherwise, arrange to have a calibrated profiler available when paving the final riding surface.
3. Perform daily calibration verification of the profiler using test methods according to the manufacturer's recommendations. Notify the engineer prior to performing the calibration verification. If the engineer requests, arrange to have the engineer observe the calibration verification and operation. Maintain records of the calibration verification activities, and provide the records to the engineer upon request.

C.4 Testing

C.4.1 Run and Reduction Parameters

Enter the equipment-specific department-approved filter settings and parameters listed on the department's ride website:
http://roadwaystandards.dot.wi.gov/standards/qmp/profilers.pdf.

C.4.2 Contractor Testing

(1) Operate profilers within the manufacturer's recommended speed tolerances. Perform all profile runs in the direction of travel. Measure the longitudinal profile of each wheel track of each lane. The wheel tracks are 6.0 feet apart and centered in the traveled way of the lane.

(2) Coordinate with the engineer to schedule profile runs for acceptance. The department may require testing to accommodate staged construction or if corrective action may be required.

(3) Measure the profiles of each standard or partial segment. Define primary segments starting at a project terminus and running contiguously along the mainline to the other project terminus. Field-locate the beginning and ending points for each profile run. When applicable, align segment limits with the sublot limits used for testing under the QMP Concrete Pavement specification. Define segments one wheel path wide and distinguished by length as follows:
    1. Standard segments are 500 feet long.
    2. Partial segments are less than 500 feet long.

(4) Treat partial segments as independent segments.

(5) The department will categorize each standard or partial segment as follows:

Segments with a Posted Speed Limit of 55 MPH or Greater	
Category	**Description**
HMA I	Asphalt pavement with multiple opportunities to achieve a smooth ride. The following operations performed under this contract are considered as opportunities: a layer of HMA, a leveling or wedging layer of HMA, and diamond grinding or milling of the underlying pavement surface.
HMA II	Asphalt pavement with a single opportunity to achieve a smooth ride.
HMA III	Asphalt pavement segments containing any portion of a bridge, bridge approach, railroad crossing, or intersection. An intersection is defined as the area within the points of curvature of the intersection radii.
PCC II	Concrete pavement including all gaps.
PCC III	Concrete pavement segments containing any portion of a bridge, bridge approach, railroad crossing, or intersection. An intersection is defined as the area within the points of curvature of the intersection radii.

Segments with Any Portion Having a Posted Speed Limit Less Than 55 MPH	
Category	**Description**
HMA IV	Asphalt pavement including intersections, bridges, approaches, and railroad crossings.
PCC IV	Concrete pavement including gaps, intersections, bridges, approaches, and railroad crossings.

C.4.3 Verification Testing

(1) The department may conduct verification testing (QV) to validate the quality of the product. A certified HTCP profiler technician will perform the QV testing. The department will provide the contractor with a listing of the names and telephone numbers of all verification personnel for the project.

(2) The department will notify the contractor before testing so the contractor can observe the QV testing. Verification testing will be performed independent of the contractor's QC work using separate equipment from the contractor's QC tests. The department will provide test results to the contractor within 1 business day after the department completes the testing.

(3) The engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's testing procedures and equipment. Both parties will document all investigative work.

(4) If the contractor does not respond to an engineer request to resolve a testing discrepancy, the engineer may suspend production until action is taken. Resolve disputes as specified in C.6.

C.4.4 Documenting Profile Runs

(1) Compute the IRI for each segment and analyze areas of localized roughness using the ProVAL software. Also, the contractor shall prepare the ProVAL Ride Quality Module Reports, showing the IRI for each segment and the areas of localized roughness exceeding an IRI of 200 in/mile. Use ride quality module report as follows:

Fixed Interval	Continuous (Localized Roughness)	
Base-length	500’	25’
Threshold	140”/Mile	200”/Mile

The ProVal software is available for download at: http://www.roadprofile.com.

As part of the profiler software outputs and ProVal reports, documents the areas of localized roughness. Field-locate the areas of localized roughness prior to the engineer’s assessment for corrective actions. Document the reasons for area excluded and submit to the engineer.

Within 5 business days after completing profiling of the pavement covered under this special provision, unless the engineer and contractor mutually agree to a different timeline, submit the electronic ProVal project file containing the .ppf files for each profiler acceptance run data and Ride Quality Module Reports, in .pdf format using the department’ Materials Reporting System (MRS) software available on the departments’ website: http://www.atwoodsystems.com/mrs.

C.5 Corrective Actions

C.5.1 General

Analyze the data from the PROVAL reports and make corrective action recommendations to the department. The department will independently assess whether a repair will help or hurt the long-term pavement performance before deciding on corrective action. Correct the ride as the engineer directs in writing.

C.5.2 Corrective Actions for Localized Roughness

(1) Apply localized roughness requirements to all pavements, including HMA III, PCC III, HMA IV, and PCC IV; except localized roughness requirements will not be applied to pavements within 25 feet of the following surfaces if they are not constructed under this contract: bridges, bridge approaches, or railroad crossings. The department may direct the contractor to make corrections to the pavement within the 25-foot exclusionary zones and will compensate the contractor for the extra work.

(2) The engineer will review each individual wheel track for areas of localized roughness. The engineer will assess area of localized roughness within 5 business days of receiving notification that the reports were uploaded. The engineer will analyze the report documenting areas that exceed and IRI of 200in/mile and do one of the following for each location:

1. Direct the contractor to correct the area to minimize the effect on the ride.
2. Leave the area of localized roughness in place with no pay reduction.
3. Except for HMA IV and PCC IV segments, assess a pay reduction as follows for each location in each wheel path:

Localized Roughness IRI (in/mile)	**Pay Reduction[1] (dollars)**
> 200	(Length in Feet) x (IRI – 200)

[1] A maximum $250 pay reduction may be assessed for locations of localized roughness that are less than or equal to 25 feet long. Locations longer than 25 feet may be assessed a maximum pay reduction of $10 per foot.

3) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without independent identification of that area as determined by physically riding the pavement. For corrections, use only techniques the engineer approves.

(4) Re-profile corrected areas to verify that the IRI is less than 140 in/mile after correction. Submit a revised ProVal ride quality module report to the reference documents section of the MRS for the corrected areas to validate the results.

C.5.3 Corrective Actions for Excessive IRI

(1) If an individual segment IRI exceeds 140 in/mile for HMA I, HMA II, and PCC II pavements after correction for localized roughness, the engineer may require the contractor to correct that segment. Correct the segment final surface as follows:

HMA I: Correct to an IRI of 60 in/mile using whichever of the following methods as approved by the engineer: Mill and replace the full lane width of the riding surface excluding the paved shoulder.
Continuous diamond grinding or fine-tooth milling the full lane width, if required, of the riding surface including adjustment of the pave shoulders.

HMA II: Correct to an IRI of 85 in/mile using whichever of the following methods as approved the engineer:
Mill and replace the full lane width of the riding surface excluding the paved shoulder.
Continuous diamond grinding or fine-tooth milling of the full lane width, if required, of the riding surface including adjustment of the paved shoulders

PCC II Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer:
Continuous diamond grinding of the full lane width if required, of the rigid surface including adjustment of the paved shoulders. Conform to sections C.1 through C.4 of Concrete Pavement Continuous Diamond Grinding Special provision contained elsewhere in the contract.
Remove and replace the full lane width of the riding surface.

(2) Re-profile corrected segments to verify that the final IRI meets the above correction limits and there are no areas of localized roughness. Submit a revised ProVAL ride quality module report for the corrected areas to the reference documents section of the MRS. Segments failing these criteria after correction are subject to the engineer's right to adjust pay for non-conforming work under standard specifications 105.3.

C.6 Dispute Resolution

(1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate testing procedures, and perform additional testing.

(2) If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming pavement, the department will use third party testing to resolve the dispute. The department's Quality Assurance Unit, or a mutually agreed on independent testing company, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent tester. The department may use third party tests to evaluate the quality of questionable pavement and determine the appropriate payment.

D. Measurement

(1) The department will measure Incentive IRI Ride by the dollar, adjusted as specified in E.2.

E. Payment

E.1 Payment for Profiling

(1) Costs for furnishing and operating the profiler, documenting profile results, and correcting the final pavement surface are incidental to the contract. The department will pay separately for engineer-directed corrective action performed within the 25-foot exclusionary zones under C.5.2 as extra work.

E.2 Pay Adjustment

(1) The department will pay incentive for ride under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
440.4410.S	Incentive IRI Ride	DOL

(2) Incentive payment is not limited, either up or down, to the amount the schedule of items shows.

(3) The department will administer disincentives for ride under the Disincentive IRI Ride administrative item.

(4) The department will not assess disincentive on HMA III or PCC III segments. Incentive pay for HMA III and PCC III segments will be according to the requirements for the category of the adjoining segments.

(5) The department will adjust pay for each segment based on the initial IRI for that segment. If corrective action is required, the department will base disincentives on the IRI after correction for pavement meeting the following conditions:

All Pavement: The corrective work is performed in a contiguous, full lane width section 500 feet long, or a length as agreed with the engineer.

HMA Pavements: The corrective work is a mill and inlay or full depth replacement and the inlay or replacement layer thickness conforms to standard spec 460.3.2.

Concrete Pavements: The corrective work is a full depth replacement and conforms to standard spec 415.

(6) The department will adjust pay for 500-foot long standard segments nominally one wheel path wide using equation "QMP 1.04" as follows:

HMA I	
Initial IRI (inches/mile)	**Pay Adjustment[1] (dollars per standard segment)**
< 30	250
≥ 30 to <35	1750 – (50 x IRI)
≥ 35 to < 60	0
≥ 60 to < 75	1000 – (50/3 x IRI)
≥ 75	-250

HMA II and PCC II	
Initial IRI (inches/mile)	**Pay Adjustment[1,2] (dollars per standard segment)**
< 50	250
≥ 50 to < 55	2750 – (50 x IRI)
≥ 55 to < 85	0
≥ 85 to < 100	(4250/3) – (50/3 x IRI)
≥ 100	-250

HMA IV and PCC IV	
Initial IRI (inches/mile)	**Pay Adjustment[1,2] (dollars per standard segment)**
< 35	250
≥ 35 to < 45	1125 – (25 x IRI)
≥ 45	0

[1] If the engineer directs placing upper layer asphaltic mixtures between October 15 and May 1 for department convenience as specified in standard spec 450.3.2.1(5), the department will not adjust pay for ride on pavement the department orders the contractor to place when the temperature, as defined in standard spec 450.3.2.1(2), is less than 36 F.

[2] If the engineer directs placing concrete pavement for department convenience, the department will not adjust pay for ride on pavement the department orders the contractor to place when the air temperature falls below 35 F.

(7) The department will prorate the pay adjustment for partial segments based on their length.

440-010 (20130615)

18. HMA Pavement.

Perform this work in accordance tostandard spec460 and as hereinafter provided.

Provide to the engineer, the results from the Freeze / Thaw Test (AASHTO T103) for quarried course aggregates used in the work produced from limestone / dolomite sources. The maximum percent loss for aggregates retained on the No. 4 sieve shall be four percent (4%).

19. Reheating HMA Pavement Longitudinal Joints, Item 460.4110.S.

A Description
This special provision describes reheating the abutting edge of the previously compacted surface layer in the adjacent lane while paving mainline asphalt pavements.

B (Vacant)

C Construction
C.1. Equipment
Provide a self-contained heating unit that heats by convection only. Do not use forced air to enhance the flame. Provide a fireproof barrier between the flame and the heater's fuel source. The heater must produce a uniform distribution of heat within the heat box. Provide automatic controls to regulate the heater output and shutoff the heater when the paver stops or the heater control system loses power.

Mount the heater on the paver inside the paver's automatic leveling device.

C.2 Reheating Joints
Evenly reheat at least an 8 inch (200 mm) wide strip of the previously compacted surface layer in the adjacent lane as follows:

1. Ambient air temperature at or above 60 degrees F (15 degrees C), reheat to 290 to 340 degrees F (143-171 degrees C).
2. Ambient air temperature below 60 degrees F (15 degrees C), reheat to 240 to 290 degrees F (115-143 degrees C).

The engineer may modify the required joint reheat temperatures to adjust for weather, wind, and other field conditions. Coordinate the heater output and paver speed to achieve the required joint reheat temperature without visible smoke emission.

D. Measurement
The department will measure Reheating HMA Pavement Longitudinal Joints by the linear foot acceptably completed as measured along the joint for each layer placed.

E. Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF

Payment is full compensation for furnishing all the work required under this bid item.
460-015 (20120615)

20. QMP HMA Pavement Nuclear Density.

A. Description

Replace standard spec 460.3.3.2 (1) and 460.3.3.2 (4) with the following:

(1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 as modified in this special provision.

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:
   1. Selection of test sites.
   2. Testing.
   3. Necessary adjustments in the process.
   4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures. Obtain the CMM from the department's web site at:
http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

(4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's website at:
http://www.atwoodsystems.com/mrs

B. Materials

B.1. Personnel

(1) Perform HMA pavement density (QC, QV) testing using a HTCP certified nuclear technician I, or a nuclear assistant certified technician (ACT-NUC) working under a certified technician.

(2) If an ACT is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

B.2 Testing

(1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter position. Perform each test for 4 minutes of nuclear gauge count time.

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges from the department's approved product list at http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm.

(2) Have the gauge calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.

(3) Prior to each construction season, and following any calibration of the gauge, the contractor must perform calibration verification for each gauge using the reference blocks located in the department's central office materials laboratory. To obtain information or schedule a time to perform calibration verification, contact the department's Radiation Safety Officer at:

Materials Management Section
3502 Kinsman Blvd.
Madison, Wisconsin 53704
Telephone: (608) 243-5998

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

(1) Select a representative section of the compacted pavement prior to or on the first day of paving for the correlation process. The section does not have to be the same mix design.

(2) Correlate the 2 or more gauges used for density measurement (QC, QV). The QC and QV gauge operators will perform the correlation on 5 test sites jointly located. Record each density measurement of each test site for the QC, QV and back up gauges.

(3) Calculate the average of the difference in density of the 5 test sites between the QC and QV gauges. Locate an additional 5 test sites if the average difference exceeds 1.0 lb/ft3. Measure and record the density on the 5 additional test sites for each gauge.

(4) Calculate the average of the difference in density of the 10 test sites between the QC and QV gauges. Replace one or both gauges if the average difference of the 10 tests exceeds 1.0 lb/ft3 and repeat correlation process from B.3.2.1 (2).

(5) Furnish one of the QC gauges passing the allowable correlation tolerances to perform density testing on the project.

B.3.2.2 Correlation Monitoring

(1) After performing the gauge correlation specified in B.3.2.1, establish a project reference site approved by the department. Clearly mark a flat surface of concrete or asphalt or other material that will not be disturbed during the duration of the project. Perform correlation monitoring of the QC, QV, and all back-up gauges at the project reference site.

(2) Conduct an initial 10 density tests with each gauge on the project reference site and calculate the average value for each gauge to establish the gauge's reference value. Use the gauge's reference value as a control to monitor the calibration of the gauge for the duration of the project.

(3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft3 of its reference value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge from the project if the 5-test average is not within 1.5 lb/ft3 of its reference value established in B.3.2.2(2).

(4) Maintain the reference site test data for each gauge at an agreed location.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) A lot consists of the tonnage placed each day for each layer and target density specified in standard spec 460.3.3.1. A lot may include partial sublots.

(2) Divide the roadway into sublots. A sublot is 1500 lane feet for each layer and target density.

(3) A sublot may include HMA placed on more than one day of paving. Test sublots at the pre-determined random locations regardless of when the HMA is placed. No additional testing is required for partial sublots at the beginning or end of a day's paving.

(4) If a resulting partial quantity at the end of the project is less than 750 lane feet, include that partial quantity with the last full sublot of the lane. If a resulting partial quantity at the end of the project is 750 lane feet or more, create a separate sublot for that partial quantity.

(5) Randomly select test locations for each sublot as specified in CMM 8.15 prior to paving and provide a copy to the engineer. Locate and mark QC density test sites when performing the tests. Perform density tests prior to opening the roadway to traffic.

(6) Use Table 1 to determine the number of tests required at each station, depending on the width of the lane being tested. When more than one test is required at a station, offset the tests 10 feet longitudinally from one another to form a diagonal testing row across the lane.

Lane Width	No. of Tests	Transverse Location
5 ft or less	1	Random
Greater than 5 ft to 9 ft	2	Random within 2 equal widths
Greater than 9 ft	3	Random within 3 equal widths

Table 1

B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) A lot represents a combination of the total daily tonnage for each layer and target density.

(2) Each side road, crossover, turn lane, ramp, and roundabout must contain at least one sublot for each layer.

(3) If a side road, crossover, turn lane, or ramp is 1500 feet or longer, determine sublots and random test locations as specified in B.4.1.1.

(4) If a side road, crossover, turn lane, or ramp is less than 1500 feet long, determine sublots using a maximum of 750 tons per sublot and perform the number of random tests as specified in Table 2.

Side Roads, Turn Lanes, Crossovers, Ramps, Roundabouts: Sublot/Layer tonnage	Minimum Number of Tests Required
25 to 100 tons	1
101 to 250 tons	3
251 to 500 tons	5
501 to 750 tons	7

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

(1) Calculate the average sublot densities using the individual test results in each sublot.

(2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

(3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sub lot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay according to standard spec 460.5.2.2.

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.2.2 Width of 5 Feet or Less

(1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.4 Documentation

(1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

(1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.

(2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted sublot. Testing in a previously accepted sublot will not be used to recalculate a new lot density.

(3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full sublot width within the traffic lanes or shoulders.

(4) Retesting and acceptance of replaced pavement will be according to standard spec 105.3.

(5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the sublot and lot densities.

(6) If 2 consecutive sublot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the

sublots and a minimum of one sublot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.

(2) The QV tester will test each selected sublot using the same testing requirements and frequencies as the QC tester.

(3) If the verification sublot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.

(4) If the verification sublot average is more than one percent below the specified target density, compare the QC and QV sublot averages. If the QV sublot average is within 1.0 lb/ft3 of the QC sublot average, use the QC tests for acceptance.

(5) If the first QV/QC sublot average comparison shows a difference of more than 1.0 lb/ft3 each tester will perform an additional set of tests within that sublot. Combine the additional tests with the original set of tests to compute a new sublot average for each tester. If the new QV and QC sublot averages compare to within 1.0 lb/ft3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft3 after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

(1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge correlation according to B.3.2.1.

(2) The testers may use correlation monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.

(3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

(4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

(1) The department will not accept QMP HMA Pavement Nuclear Density if a non-correlated gauge is used for contractor QC tests.

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

E.2 Disincentive for HMA Pavement Density

(1) The department will administer density disincentives according to standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

(1) Delete standard spec 460.5.2.3.

(2) If the lot density is greater than the minimum specified in standard spec table 460-3 and all individual air voids test results for that mixture are within +1.0 percent or -0.5 percent of the design target in standard spec table 460-2, the department will adjust pay for that lot as follows:

Percent Lot Density Above Minimum	Pay Adjustment Per Ton
From -0.4 to 1.0 inclusive	$0
From 1.1 to 1.8 inclusive	$0.40
More than 1.8	$0.80

(3) The department will adjust pay under the Incentive Density HMA Pavement bid item. Adjustment under this item is not limited, either up or down, to the bid amount shown on the schedule of items.

(4) If a traffic lane meets the requirements for disincentive, the department will not pay incentive on the integrally paved shoulder.

(5) Submit density results to the department electronically using the MRS software. The department will validate all contractor data before determining pay adjustments.

460-020 (20100709)

21. General Provisions for Storm Sewer.

Contact Information:

Eric Dundee, P.E.
City Engineering
Phone: (608) 266-4913
E-mail: edundee@cityofmadison.com

Construct all round and elliptical shape storm sewers in accordance to the pertinent provisions of standard specs 608, 610 and 611 as shown on the plans, and as follows.

Prior to ordering drainage pipes and structures, verify related drainage information in the plan with the engineer. This shall include all information obtained from the bid item "Utility Line Opening" (ULO).

Seal the joints for reinforced concrete pipe with either mastic or internal rubber gaskets as described in standard specs 607.2.3 and 607.2.4. The use of mortar as a pipe joint method is prohibited.

Lay all round and elliptical shape storm sewers on a 6-inch minimum thick bed of Base Aggregate Dense Graded 1 1/4-Inch in accordance to standard spec 305.2.1 or when water is encountered, No. 1 coarse concrete aggregate in accordance to standard spec 501.2.5.4. Bedding for round and elliptical pipe shall be incidental to the installation costs of the round or elliptical pipe.

Construct all storm structures rectangular in shape. Construct catch basins, manholes and inlets using only precast or cast in place concrete masonry options. All structures shall be reinforced concrete. Concrete brick and block options are prohibited.

Construct all structures (manholes and inlets) on a 12-inch minimum thick bed of Base Aggregate Dense Graded 1 1/4-Inch in accordance to standard spec 305.2.1 or when water is encountered, No. 1 coarse concrete aggregate in accordance to standard spec 501.3.6.4.5, and as shown on the plans. Bedding for structures shall be incidental to the installation costs of the structure.

Bid all structures (manholes and inlets) as field poured, and construct all structures as field-poured unless the contractor receives approval of the City of Madison design engineer to precast the structures. This approval will not be given until it can be confirmed that the proposed design will fit existing conditions including possible utility conflicts. No precast approval shall be authorized for any structure until such time as all ULO's that could affect the structure/structures in question have been completed and the City of Madison design engineer has had a minimum of three working days to review all the relevant information.

Submit shop drawings for all precast structures to the City of Madison design engineer. The city design engineer shall have three days to approve or reject the shop drawings. Under no circumstance shall a precast structure be brought to or used on the construction site without a written approval of the shop drawing for that structure prior to its use on site.

Do not use station and offset for inlet structures, as given on the storm plans, for final layout of the structure. Determine the curb line in the area of the inlet prior to pouring the inlet structure to assure proper location of the inlet relative to the curb line.

The costs to connect storm sewer to existing structures or pipes and the costs to plug pipes for future use including tapping the hole, placing the pipe and sealing the joint, furnishing and installing a plugging device as specified above, will be included in the unit price bid for the pipe of the type, class and diameter used. The cost includes installing a concrete plug in the portion of the abandon pipe that remains in place after completion of storm sewer trench.

Carefully remove and stockpile all existing inlet, manhole, and catch basin covers that are not being adjusted and reused on the project at a location on the right-of-way outside the construction limits for pickup by City of Madison personnel. Contact Jim Martinson, City of Madison Department of Public Works at (608) 267-1973 to schedule pickup.

Remove from the right-of-way and dispose of all frames or grates and all other material that the city does not want.

22. General Provisions for City of Madison Sanitary Sewer.

Utility Standard Specifications
Perform work in accordance to these provisions and the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction and the City of Madison Standard Specifications for Public Works Construction-Latest Edition, hereinafter referred to as the *City Standard Specifications*. The City of Madison Standard Specifications are available on the City's website at: http://www.cityofmadison.com/business/pw/specs.cfm. In the event of a conflict the Wisconsin Department of Transportation Standard Specifications will take precedence.

Work Sequence
Contact the identified person below 10 working days prior to starting work on the sanitary sewer and provide a schedule of operations. Construct sanitary sewer main and laterals in stages in accordance to the traffic control plan and in proper coordination with construction for activities adjacent to the sanitary sewer main.

Provide bypass pumping of sanitary sewage to maintain sanitary sewer service when new sewer access structures are being constructed over the existing mains.

Shop Drawings and Samples
Submit shop drawings and samples to the engineer and City of Madison Engineering Department as required in these Special Provisions and for the following:

- Sanitary Sewer Pipe Material
- Sanitary Sewer Access Structure Casting and Manhole Covers Type J Special (Madison logo lid)
- Sanitary Sewer Internal Chimney Seal
- Sanitary Sewer Access Structure (4-Foot Diameter)
- Sewer Electronic Markers
- Select Fill for Sanitary Sewer

Contractor's responsibilities include:

- Review shop drawings and samples prior to submittal;
- Determine and verify field measurements, field construction criteria, catalog numbers and similar data, and conformance with specifications;
- Coordinate each submittal with requirements of work and of Special Provisions.

Notify City Engineer or City Engineer's Representative, in writing, at time of submittal of deviations in submittals from requirements of Special Provisions.

NOTE: Do not begin any fabrication or work listed above as requiring shop drawings or samples until return of submittals with City Engineer's or City Engineer Representative's approval.

Provide shop drawings containing the following:

A. Date of submittal and dates of previous submittals.
B. Project title and number.
C. Contract identification.
D. Names of contractor, supplier, and manufacturer.
E Identification of product, with identification numbers, and drawing and specification section numbers.
F. Field dimensions clearly identified.
G. Identification of details required on drawings and in specifications.
H. Manufacturer and model number (give dimensions and provide clearances).
I. Relation to adjacent or critical features or work or materials.
J. Applicable standards, such as ASTM, and identification of deviations from contract documents.
K. Source of samples and material properties.
L. Identification of revisions on re-submittals.
M. Eight-inch and three-inch blank space for contractor and City Engineer stamps.
N. Contractor's stamp, signed, certifying to review of submittal, verification of products, field measurement, field construction criteria, and coordination of information with submittal with requirements of work and Special Provisions.

If required by the City Engineer or City Engineer's Representative, resubmit shop drawings that include the following:

A. Corrections or changes from previous submittals as indicated by City Engineer or City Engineer's Representative. Re-submittals are required until approved.
B. Shop Drawings and Product Data: Review initial drawings or data and resubmit as specified for initial submittal. Indicate changes, which have been made other than those requested by City Engineer.

Testing and Acceptance: Submit materials production and field placement testing results as required by the City of Madison Standard Specifications for Public Works Construction-Latest Edition or as required by the City Engineer or City Engineer's Representative. Final acceptance of sanitary sewer and related materials such as backfill, concrete, slurry, etc. will come from the City Engineer or City Engineer's Representative.

Allow the City of Madison to sample/test materials as requested. Provide complete copies of required submittals as follows:

Shop Drawings:	Six copies
Sampling/Testing Results:	Three copies

Deliver required copies of submittals and testing results to Mark Moder, City of Madison, Department of Public Works, City-County Building, Room 115, 210 Martin Luther King Jr. Boulevard, Madison, Wisconsin 53710.

The City Engineer or City Engineer's Representative will review and return shop drawings to the contractor within one week of date of receipt.

Protection of Sewers: Take adequate measures to prevent impairment of operation of existing sanitary sewer and storm sewer systems. Prevent construction material, concrete, earth, or other debris from entering sewer or sewer structure.

Divert sewage flow interfering with construction to sanitary sewers leading away from construction area. Prior to commencing excavation and construction of work impacting existing city sewer, submit to City Engineer for review, detailed plans, including routing and connections, required to handle and dispose of sanitary wastes. By reviewing the plan, the City Engineer neither accepts responsibility for adequacy thereof nor for damages to public or private property resulting there from, such responsibilities remain with the contractor.

Sanitary sewer damaged or removed during construction, which is to remain in service, will be restored or replaced to original material and workmanship used for original construction.

All City of Madison manhole castings removed from sewer access structures (removed, abandoned, or swapped out with a casting elevation adjustment) will be delivered to City Engineering's Service Building, 1600 Emil Street, Madison, WI 53713.

The costs to remove all abandoned utility pipes within the sanitary sewer pipe trench or sewer access structure excavation will be included in the unit price bid for the pipe of the type, class and diameter used. The cost includes installing a concrete plug in the portion of the abandon pipe that remains in place after completion of sanitary sewer trench.

In accordance to the City of Madison Standard Specifications for Public Works Construction – Latest Addition, "Pipe to be removed that is in the same trench as a new pipe will not be compensated as remove pipe and will be considered to be incidental to the new pipe installation." Same trench will considered to be any pipe located with 3' horizontally of the pipe being installed.

City of Madison (sanitary sewer) has underground facilities located within the project area. Relocation of the underground facilities will be accomplished as part of contract 5992-09-12 by the contractor. Existing facilities and anticipated proposed relocations are as follows:

- East Johnson Street- east side of street (6" and 8" diameter): Station 12'EJ'+60 to Station 67'EJ' +28
- East Johnson Street- west side of street (6" diameter): Station 61'EJ'+25 to Station 64'EJ'+10
- North Butler Street- west of street(8" new)
- North Hamilton Street- Center of street (15")
- North Hancock Street- Center of street (8")
- North Franklin Street Center of Street (18")
- North Blair Street Center of street (6")
- North Blount Street Center of street (6")
- North Livingston Center of street (6")
- North Paterson Center of street (10")
- North Brearly Street Center of street(8")
- North Ingersoll Street Center of street(8")
- North Baldwin Street Center of Street (8")

Sanitary Sewer removals, replacements, and adjustments are included as part of the project as shown on the plans. Complete all work within the existing right-of-way. Coordinate operations with the City of Madison. Contact Mark Moder (608) 261-9250.

23. General Provisions for City of Madison Water Main.

Contact Information:

Madison Water Utility
Dennis Cawley, P.E.
Phone: (608) 261-9243
E-mail: dcawley@madisonwater.org

Utility Standard Specifications: Perform work in accordance to these provisions and the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction and the City of Madison Standard Specifications for Public Works Construction-Latest Edition, hereinafter referred to as the *City Standard Specifications*. The City of Madison Standard Specifications are available on the City's website at: http://www.cityofmadison.com/business/pw/specs.cfm. In the event of a conflict the Wisconsin Department of Transportation Standard Specifications will take precedence.

Work Sequence:
Contact the identified person above 10 working days prior to starting water main work and provide a schedule of operations.

Construct water main and water service laterals in stages in accordance to the traffic control plans and in proper coordination with construction activities adjacent to the water main. Note that all water main and service laterals that will cross the north Johnson corridor from the south Johnson Street corridor where the proposed main is to be installed, will need to be stubbed at the traffic control/phasing limits.

As construction staging and sequence allows, disinfect the new water mains. Madison Water Utility will flush and test all newly installed water mains. Coordinate as necessary with Madison Water Utility for these operations. After the water main has passed bacteriological and pressure testing, install replacement water services and make connections to the existing water system. Water main installation will consist of strategic abandonment of the existing water main. Abandon existing water main only after the new water main has passed all required testing, new main has been properly brought online into the system and all service laterals, except those called to be abandoned, have been relocated to the new main.

Keep valves at connection points between the new water main and the existing water main closed until the new water main has passed all testing. Where new valves need to be opened to fill the new water main for testing and flushing, sequencing shall be so arranged to preclude backflow of any water from the new water main to the existing water main.

Following the installation of replacement water services and the connection of replacement water main to the existing water main at locations noted on the plans, the existing water main shall be cut off; drained; open ends plugged or bulk-headed with concrete; and the pipe abandoned in place. This work is considered incidental to the new water main installation.

Installations inside Protective Measures Areas: There are areas within the project limits where groundwater testing revealed contaminant levels approaching or exceeding the NR 809 Safe Drinking Water Maximum Contaminant Levels (MCL's). A 50-foot boundary outside the approximate limit of these areas is identified on the plans as protective measures areas. All water main installed inside the boundary is required by WDNR to meet specific criteria. Meet the following protective measures for all water main installations inside the protective measures areas as identified in the plans:

- Permanently plug, prior to installation, the drain ports on hydrants or install hydrants without drain ports.
- Furnish and install nitrile or fluorocarbon gaskets as directed in the plans.
- Furnish and install clay trench plugs where directed in the plans.

Service Disruption Notification: Follow City Standard Specifications for water service outage notification for all affected customers. The customers in the table below are sensitive to water service disruptions due to the nature of their businesses. For these customers, provide the following <u>additional</u> notification measures:

1) Coordinate water service disruptions to minimize impacts to these businesses.
2) Provide as much notice as possible beyond the required 48 hour notice.
3) Notify each customer below by phone to alert them of impending service disruptions a minimum of 48 hours prior to the outage. If contact cannot be made, leave a construction contact name and phone number by voice-mail or door hanger.
4) For the 5 businesses where a "Before Noon" or "After Noon" service outage preference is noted, honor the preference for each customer.

Business Name	Address	Contact Name	Contact Phone	Service Outage Preference
Heitke & Vu, DDS LTD	122. E. Johnson St.	Golden Vu	608-257-0116	After Noon, Friday or weekends
Pinkus McBride Market	301 N Hamilton St	John Wallace	608-284-8000 608-712-1752	
Forequarter Restaurant	708 1/4 E. Johnson St.	Mel Trudeau	608-239-5474	Before Noon
The Caribou Tavern	703 E. Johnson St.	Mark Schmelzkoph Jeff Taylor	608-235-5771 608-772-4604	
Self-Serve Laundry	701 E. Johnson St.	Eugene Klar	608-249-0589	
Jewel in the Lotus Yoga, LLC	821 E. Johnson St.	Aubree Saia	608-661-9642	Before Noon
Dog Haus University	825 E. Johnson St.	Nate Mathis	608-515-8255 608-669-3448	
The Spot Restaurant	827 E. Johnson St.	Richard Entenmann	608-663-6332	Before Noon
Sophia's Bakery & Cafe	831 E. Johnson St.	Owner or Manager	608-259-1506	
Madison Food Mart	902 E. Johnson St.	Abdullah Akhum	608-256-2075	
Johnson Public House	908 E. Johnson St.	Kyle or Gwen	608-347-0483	
Madtown Pizza	912 E. Johnson St.	Owner or Manager	608-250-3333	
Studio 924 Hair Designs	924 E. Johnson St.	Janice or Marciann	608-251-2777	Before Noon
Newport's Wood Furnishings	1257 E. Johnson St.	Tim Newport	608-251-2441	

Hydrants: Determine the location of the curb line, sidewalk limits, and existing utilities in the area prior to hydrant installation to assure the proper location of the hydrant

relative to the curb line. This work is considered incidental to the new water main installation.

Where needed, use offsets and/or bends on the hydrant lead such that the hydrant is installed at a minimum bury depth of six feet and required clearances with storm sewer, sanitary sewer and other pipes are maintained. In no case may a hydrant be set at a depth greater than nine feet from grade. Assess the need for hydrant extensions. All hydrant extensions and fittings on the lead are incidental to the installation of the hydrant.

Either permanently abandon or securely bag any installed hydrant, either existing or new, that is not supplied by an in-service main overnight or for longer than twelve hours until the hydrant is permanently abandoned or back in service.

Temporary Flushing Hydrants: The installation of temporary flushing hydrants may be desired as part of the phasing and sequencing of water main installation. The furnishing, installation, use and abandonment of temporary flushing hydrants is considered incidental to water main installation.

Temporary Air Bleed: Where any installation of proposed water main does not have an adjacent hydrant or other means of bleeding air from the main, install a temporary 2-inch corporation stop at the high point of the main. Remove the stop and plug the opening after successful completion of water main testing. Installation, use, maintenance, removal and plugging of corporation stops for use as air bleeding devices are considered incidental to the installation of water main.

Instructions for 1-inch Service to 303 North Hamilton Street: For the purpose of providing an open corridor on the 300 block of East Johnson Street ahead of the installation of private utility facilities, implement the following work sequence to transfer the 1-inch water service to 303 North Hamilton Street from the existing main to the new main: 1) Install a new 1-inch copper service (WN11) per the detail for service laterals installed under the future ATC/MGE facility (see note to avoid conflict with existing street tree). 2) Couple the new 1-inch service lateral to the existing lateral as close as possible to the existing main (approximately Offset 6.0’ RT) to re-establish service. 3) Abandon the existing service. 4) Disconnect the new service from the old main and reconnect it to the new main after the new main is accepted into service (WN4). The labor and materials for replacing the existing water service (WN11) will be paid by the linear foot under Bid Item SPV.0090.30. The labor and materials for the lateral disconnection and reconnection (WN4) will be paid under Bid Item SPV.0060.051.

Thrust Restraint: Restrain all joints on proposed water main. Use restrained joint pipe except at valves and where vertical installations exceed 45°. Use mechanical joint fittings with mechanical joint restraint for all valves and fittings installed at an angle greater than 45° vertically. Restrain fittings per City Standard Specifications at hydrant installations and where connecting to existing water main.

North Corridor Service Laterals: Tap all service laterals that will extend from the new water main across the North Johnson Street corridor during installation of the proposed water main in the south corridor. Stub the laterals to the traffic control/phase limits with a curb stop with the valve in the off position and at the elevation required to clear north corridor utilities. Make the final service connection from the curb stop, leaving the curb stop underground without a box with the valve in the open position. When making the final connection, ensure the previously installed copper is still securely connected to the curb stop and that the lateral has not been compromised during construction. Repair any damaged laterals or leaking connections at no additional cost to the department. The furnishing and installation of the curb stop and coupling from the south corridor are incidental to the respective service bid item. Additional work performed to install a service that was not stubbed out is incidental to the service bid items.

North Corridor Water Mains: Temporarily cap or plug all water mains that will extend from the proposed water main across the North Johnson Street corridor at the traffic phase limits during installation of the proposed water main in the south corridor. Installation and removal of temporary caps and plugs is incidental to the installation of proposed water main.

Abandoned Facilities: Abandoned facilities exist within the project limits and utility companies will be abandoning some additional facilities in place after relocating facilities to avoid conflicts with the proposed work. Removal by the contractor of any abandoned facilities necessary to complete the proposed work, including plugging the remaining ends of the facility, is considered incidental to the contract. Contact each utility company individually to verify if any can be expected and to possibly obtain facility maps for approximate locations. The costs to remove all abandoned utility pipes within the water main trench or related excavation will be included in the unit price bid for the respective bid item. The cost includes installing a concrete plug in the portion of the abandoned pipe that remains in place after completion of the trench or excavation.

Location of Existing Water Service Laterals: The horizontal location and size of all water laterals indicated on the plans is taken from surveys, approximate measurements, and the city's available records. These records are not guaranteed to be accurate in all cases and do not indicate at what depths these laterals are located. As such, determine the location and size of the existing laterals before making a tap into the new water main. Follow the plans to determine which services are to be abandoned, reconnected, extended, or replaced to the property line.

Location of Existing Water Facilities: The horizontal and vertical location and size of all existing water mains indicated on the plans is taken partially from surveys, approximate measurements, and the city's available records. These records are not guaranteed to be accurate in all cases. Due to the unverified depth and location of existing pipelines, alteration of the lines and grades shown on the plans for new pipelines where connections are to be made to existing pipelines may be necessary. Notify the engineer of locations where alterations of the lines and grades shown are necessary so that an acceptable solution can be determined.

24. Cover Plates Temporary, Item 611.8120.S.

A Description
This special provision describes furnishing, installing and removing a steel plate to cover and support asphaltic pavement and traffic loading at manholes, inlets and similar structures during milling and paving operations.

B Materials
Provide a 0.25-inch minimum thickness steel plate that extends to the outside edge of the existing masonry.

C (Vacant)

D Measurement
The department will measure Cover Plates Temporary, acceptably completed in place, as each individual unit.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
611.8120.S	Cover Plates Temporary	Each

Payment is full compensation for furnishing, installing, and removing the cover plates.

The steel plates shall become the property of the contractor when no longer needed in the contract work.
611-006 (20030820)

25. Maintaining Street Name Signs.

Maintain all existing street name signs in a location visible to traffic until new street name signs are installed. Payment for this work is incidental to the item Traffic Control Surveillance and Maintenance.

26. Fastening Signs to Supports.

Supplement standard spec 637.3.3.3 as follows:

Fasten type II and type III signs to 2-inch pipe installations using single or double Morris ring sign brackets from Vulcan Signs, TAPCO (#318), or Decker Supply (or approved equivalent).

27. General Provisions for City Conduit Installation.

Supplement standard spec 652 as follows:

Use Schedule 80 conduit under all traffic areas.

Install all conduit at a minimum depth of 30 inches, unless otherwise approved by the engineer. Solvent weld all joints. Mark the location of each conduit, where conduit crosses traffic areas, by a permanent chiseled arrow or other appropriate permanent stamp in top of the curb head.

Install and connect all conduit to the concrete bases, manholes, handholes, existing conduit, or conduit elbows so as to provide a continuous network, unless otherwise indicated on the plan. All connections shall be watertight. Do not install drainage holes in conduit. Uncover the ends or mid-sections of all existing conduit that is being extended by or incorporated into this project work.

When connections are to be made to an existing conduit, first verify that the existing conduit is fully clear and useable for its entire cross-section and length. When the existing conduit is found to be defective, notify the engineer and do not proceed until the engineer so directs. If the contractor connects to an existing defective conduit without the express direction from the engineer, make any and all necessary repairs and replacements to all conduits, including conduit that was "existing" prior to the contractor starting work and to the satisfaction of the engineer. All costs of this work shall be at the expense of the contractor.

Turn up conduits terminating in a non-paved location and not in a structure, and end at terrace finish grade with a PVC cap securely attached, per duct termination detail. Where conduit runs parallel to curb and gutter, place the conduit within 12 inches of the back of the curb, except as directed by the engineer. The engineer will determine termination points not within pull boxes or concrete bases.

Unless the contract provides for installation of cable, cap the ends of each run of conduit with standard conduit caps or otherwise appropriately plug the ends to preclude infiltration of water and soil. Install a pull wire in each conduit, except those with only streetlight wire. A pull wire shall be approximately 4 feet longer than the conduit run, and shall be doubled back for at least 2 feet at each terminal. The pull wire shall be #10 AWG copper, stranded, with THHN insulation and green color coding. Install the pull wire within seven days of completing a conduit installation from structure-to-structure.

Use a 6-inch minimum sand padding below the conduit and a 6-inch minimum sand lift above the conduit. Do not backfill trench with any rocks larger than 4 inches in diameter or any foreign debris.

28. General Provisions for City Traffic Signals.

Perform all work on the lighting and conduit/pull box system in accordance to the Wisconsin Electrical Code, the applicable provisions of the standard specifications, and these special provisions and plans.

The City of Madison will remove existing traffic signals and "signal only" poles when the temporary signals are in place at each intersection. Contact Michael Christoph at the City of Madison Traffic Engineering Shop, (608) 266-9031, to coordinate removal of existing signals and installation of new signals.

Remove existing streetlight poles identified for removal, including those that also have traffic signal equipment on them.

Each pedestrian push button installation shall include "Push Button for Walk Signal" signs. Single direction arrow signing shall also be used with all buttons except two direction arrow signing is needed for single buttons on median poles.

Interconnect to all traffic signals shall be maintained.

All new electric services shall be metered power, 100 amperes, 120 volt. CG-3 time-of-use rate.

A minimum of 6 feet separation shall be maintained between any adjacent loop detectors.

29. General Provisions for City Electrical Systems.

A General Requirements

Perform this work in accordance to the Wisconsin Electrical Code, National Electrical Contractors Association (NECA) electrical construction practices, OSHA and the standard specifications.

Perform all work on the lighting and conduit/pull box system in accordance to the Wisconsin Electrical Code, and applicable provisions of standard spec 659, and these special provisions and plans.

Carefully remove and salvage the steel frames and covers from all pull boxes and manholes to be removed or abandoned, and all street light poles, arms, transformer bases, fixtures, concrete handholes, and associated equipment. Material designated by the city to be saved shall be returned to City Traffic Engineering, 1120 Sayle Street, Madison.

Complete electrical work by a journey-worker electrician or be completed by an electrical apprentice under the supervision of a journey-worker electrician. Legal status or standing as a journey-worker and apprentice electricians shall be certified or otherwise documented to the engineer before beginning any electrical work. Electrical work is hereby defined as electrical and related construction required to be performed under the

contract by the contractor, in accordance to the standard specifications, contract provisions, standard detail drawings and plan details applicable to electrical construction.

At the pre-construction conference, supply the engineer with a list of names and qualifications of journey-workers and/or electrical apprentices who will or may be working on this contract.

Proof of qualification to do electrical journey-worker level work shall be the "Completion of Apprenticeship" certification card issued by an approved state agency, or a resume showing sufficient electrical education and a minimum of 14,000 hours of varied electrical work experience. All apprentices shall be indentured by an approved state agency.

The contractor is hereby advised that electrical apprentices must work under the terms of their indentures, which require an apprentice be under the direct supervision of a journeyworker with the exception of an apprentice in the final year as an apprentice. Any violation, or suspected violation, of these terms will be reported to the Bureau of Apprenticeship Standards.

On completion of the work, test the installation and ensure that it is entirely free of grounds and short circuits. This contract contemplates and intends a complete and operating installation of electrical work. Everything in the form of labor or material necessary for this result is in the intent of the contract.

It must be understood that electrical drawings and details are diagrammatic; they are not intended to be shop drawings. It is expected it may be necessary to move conduit, and/or equipment in some cases, to get a coordinated installation. Such changes are considered part of the contract obligation, without cost to the owner. Do not locate any equipment where its usefulness and/or operation may be affected by the work of other trades, door swing, counter, equipment, etc.

The contractor acknowledges his acquaintance with the plans and specifications and their respective requirements, and shall guarantee the electrical system has been installed strictly in accordance to the electrical plans and specifications, using only the best of materials available and installed in a substantial manner by experienced labor. The contractor agrees to replace and/or repair items failing from causes of faulty workmanship, material or design, without extra cost, at any time within one year from the date of final acceptance.

Furnish the City of Madison with service manuals for all items furnished under this contract. Service manuals shall be complete with drawings, diagrams, operation and installation instructions, and parts lists.

New streetlight wire in conduits shall consist of 3#6 and 1#8 green wire. The color coding for the #6 wire shall be one black, one red, and one white.

Ground wires shall have green insulation or be marked with green tape at all junction or pull boxes and at all terminations. Equipment and enclosures shall be grounded, ground connection surfaces shall be cleaned, and connections shall be made so it is impossible to move them.

All maintenance of existing street light facilities within the project limits shall be the contractor's responsibility. Maintain the new street lights until project work is accepted. This work shall be considered incidental to installation of street light units, temporary lighting, and no separate compensation will be paid.

Extend existing lighting circuits to feed the new and relocated lights as part of this project. Verify the existing loads of each lighting circuit before adding additional load to a lighting circuit. Loading on any circuit shall not exceed NEC requirements.

Submit one copy of as-built plans, including cable and conduit routing diagrams, wiring of fixtures and other pertinent details, to the engineer and the City of Madison.

Furnish equipment and appliances necessary to test the complete installation of electrical conductors. Test and demonstrate to the satisfaction of the engineer that the circuits are properly connected, continuous and free from short circuits and unspecified grounds, that the circuits are connected in accordance to the manufacturer's wiring layout, and that each circuit is operational. The lighting system shall not be deemed complete until the electrical work has been completed and the electrical systems are found to be in proper working order, including operation for ten consecutive nights without failure.

B Materials

All materials furnished by the contractor for lighting installation under this contract are subject to approval by the engineer.

Manufacturers shall be responsible for providing materials listed by UL or other approved agencies and all governing codes and ordinances. Materials must bear a UL and/or other approved labels, where possible. Items specified by catalog number of brand name and shop drawing approval will not relieve the manufacturer of this responsibility. All electrical material for which a standard has been established by the Underwriters Laboratories, Inc. shall be furnished and installed under this contract. Material shall have the UL label firmly attached and be listed by UL Listing signifies that the material has passed the established standard testing. All electrical materials shall conform to the latest requirements of the Wisconsin Electrical Code.

All materials, not specified herein, used in the work shall conform to the requirements specified on the plan or the contract special provisions.

Furnish and install incidental items, such as wire nuts, grommets, tape, connectors, and electrical varnish that are obviously necessary to make the proposed system complete from the source of supply to the most remote unit.

Touch up mars and scratches on painted equipment with two coats of synthetic resin enamel or as directed by the engineer.

Furnish a complete list and cut sheets/shop drawings of materials to be furnished and used for lighting. Include the names and addresses of manufacturers, together with catalog numbers, certificates of compliance, specifications, and other product information requested by the engineer. Submit the list and cut sheets/shop drawings within 20 calendar days of the award of the contract. Do not incorporate any materials into the lighting system prior to obtaining the written approval of the engineer. Approval does not change the intent of the specifications. Do not substitute any materials. The contractor is allowed up to two submittals of material for approval. If more than two submittals are required, the contractor will be charged on a time-and-material basis for additional review time with payment made before submittals will be reviewed.

C Splices

Splices shall comply with standard spec 659.3.2. All splices within a junction box, handhole, etc. shall be of the same type. No splices are allowed in underground pull boxes, except for grounding conductors.

D Circuit Identification

Accomplish color coding by using cable jackets of the proper color. Code all tails of all splices. Color-code secondary distribution circuits as shown on the plans; the ground conductor shall be green. Each accessible location of underground cable in junction boxes, pull boxes and pole bases shall have a permanent white nylon tag with black lettering, attached in a "flag" manner using a nylon tie, identifying the cabinet and conductor circuit number.

E Branch Circuit Tagouts

The contractor may at his option work on live circuits or he may disconnect and tag out circuits. Any branch circuit not disconnected and tagged out shall be considered live; restrict work force to those qualified to work on live circuits. Disconnection may be made by disconnecting branches at the overcurrent device. Make tagouts with contractor furnished manufactured electrical warning tags and endorse with the name of the contractor, the date, and the project. Clear all tagouts by the end of the workday.

F Threaded Fasteners

Liberally coat all threaded fasteners, i.e., screws, and bolts with an approved anti-seize compound. Excepting fasteners inside control cabinets, fasteners up to ½-inch in diameter shall be stainless steel.

Provide rust, corrosion and anti-seize protection at threaded assemblies by coating the mating surfaces with Markal (Hightemp E-Z Break), Never-Seez (marine grade), LPS 100, Lubriplate or approved equal.

G Bonding Wire

Install bonding wire in conduits for equipment grounding. Ground all equipment as required.

H Initial Failures
The contractor and the engineer shall agree on a time for test burning of completed installations, which is generally toward the end of the contract period. Replace failed lamps, along with any other non-functioning component, for no additional compensation. Only one test burn for the purpose of identifying initial failures will be required. Coordinate supply of replacement lamps with the city.

I Project Construction Staging
The construction of the new lighting system shall maintain the integrity of the existing lighting systems within and beyond the project limits at all times. Exceptions to this shall only be granted for just cause by the inspector.

J Items of the Same Classification
All items of the same classification shall be of the same manufacturer and series.

L Underground Installation
Ensure that the engineer has inspected all underground conduit and concrete base forms before backfilling any trench or pouring concrete. Any work completed without such inspection is subject to rejection as unacceptable work and shall be immediately removed and acceptably replaced or otherwise satisfactorily corrected by and at the expense of the contractor. It is the contractor's responsibility to arrange for inspections. There will not be any additional compensation to the contractor for delays and inconvenience associate with arranging and waiting for inspections.

30. Abandon Sanitary Sewer with Slurry, Item SPV.0035.01.

A Description
This work consists of abandoning sanitary sewer pipe with slurry as shown in the plans and as hereinafter provided.

B (Vacant)

C Construction
Abandoning sewer pipe with slurry includes plugging one end of the pipe paid separately under the bid item pipe plug, and requires the entire pipe be filled with slurry. Vent holes may be required by the engineer to verify there are no voids left in the pipe. Saw cutting and removal of the existing pipe at the limits of abandonment is included in this item. Use slurry that conforms to Type B Slurry Mix as specified in Article 301.9 of City of Madison Standard Specifications. Abandon sewer pipe by plugging the end(s) of the pipe. Maintain service in the existing sewers until the replacement sewers or appropriate bypasses approved by the engineer have been installed, at such time bulkheads or plugs may be placed. Contact and coordinate with other utilities so that they may plug their own facilities.

D Measurement
The department will measure Abandoning Sanitary Sewer with Slurry by the cubic yard, acceptably completed.

E Payment
The department will pay for the measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Abandon Sanitary Sewer with Slurry	CY

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work.

31. Temporary Crosswalk Access, Item SPV.0045.01.

A Description
This special provision describes maintaining accessible crosswalks crossing the construction zone.

A crosswalk is defined as an accessible crossing of a single leg of an intersection, including curb ramps.

B Materials
Furnish a hard temporary surface material consisting of asphaltic surface temporary according to standard spec 465.2, any grade of concrete according to standard spec 602.2, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable.

Furnish safety fence according to the following;

- Furnish notched conventional metal “T” or “U” shaped fence posts.
- Furnish fence fabric meeting the following requirements:
  - Color: International orange (UV stabilized)
  - Roll Height: 4 feet
  - Mesh Opening: 1 inch min to 3 inch max
  - Resin/Construction: High density polyethylene mesh
  - Service Temperature: -60° F to 200° (ASTM D648)
  - Tensile Yield: Avg. 2000 lb per 4 ft. width (ASTM D638)
  - Ultimate Tensile Strength: Avg. 3000 lb per 4 ft. width (ASTM D638)
  - Elongation at Break (%): Greater than 100% (ASTM D638)
  - Chemical Resistance: Inert to most chemicals and acids

Furnish 4-inch diameter polyvinyl chloride drainage pipe conforming to AASHTO M 278.

Furnish a protective layer for use in protecting the existing curb and gutter and existing pavement from asphaltic surface temporary in order to allow easy removal of asphaltic surface. Obtain approval from the engineer for the protective layer material.

C Construction

Maintain accessible crosswalks on existing pavement, new pavement, or temporary surface material where shown on the plans or directed by the engineer.

Construct Safety Fence as follows:

- Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.
- Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.
- Overlap two rolls at a post and secure with wire ties.

C.1 Crosswalk

Install, maintain, relocate (if necessary to accommodate work or operations), and remove temporary surface material at Temporary Crosswalk Access locations as shown on the plans and as directed by the engineer. Level and compact the surface prior to placing temporary surface material. The temporary crosswalk shall have a minimum clear width of 4 feet; be located outside the immediate work area, as approved by the engineer; and meet the requirements of the current Americans with Disabilities Act Accessibility Guidelines (ADAAG). Install safety fence along both sides of the temporary crosswalk. Provide a gap in the safety fence as necessary to provide access for construction vehicles across the temporary crosswalk. The maximum width of the gap shall be 18 feet. Reconstruct Temporary Crosswalk Access when disturbed by construction operations or utility trenches.

C.2 Temporary Curb Ramp

Place 4-inch PVC drainage pipe in the flow line of the curb and gutter to maintain storm water drainage.

Place a protective layer between the existing curb and gutter or existing pavement and the asphaltic surface or concrete for temporary curb ramp.

For the portion of the temporary curb ramp in the terrace area, form the foundation by excavating at least 3 inches. Tamp or compact the foundation to ensure stability.

Place asphaltic surface temporary according to standard spec 465.3.1 or place concrete according to standard spec 602.3.2.3, and as shown in the plan.

Maintain temporary curb ramps until permanent curb ramps and crosswalks are in place and open to pedestrian traffic as directed by the engineer.

Remove temporary curb ramps once permanent curb ramps and crosswalks are open and restore the site.

D Measurement
The department will measure Temporary Crosswalk Access by the day in service, acceptably completed. The measured quantity will equal the number of calendar days a crosswalk through the work area is open to pedestrian traffic. A crosswalk is defined as an accessible crossing of a single leg of an intersection with existing, temporary, or finished curb ramps meeting ADA requirements. A crossing of a street with an island within the route will be considered a single crosswalk. Each day that the crosswalk is out of service for more than 2 hours will result in 1 day being deducted from the quantity measured for payment.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.01	Temporary Crosswalk Access	Day

Payment is full compensation for furnishing, loading, and hauling materials; for preparing the foundation; for furnishing, placing, maintaining, and removing temporary surface material; for reconstructing or relaying the temporary surface material; and for furnishing and installing, and maintaining safety fence.

32. Temporary Bicycle Access, Item SPV.0045.02.

A Description
This special provision describes maintaining accessible Bicycle crossings of the construction zone at Brearly Street.

A bikeway is defined as an accessible two-way crossing of an intersection.

B Materials
Furnish a hard temporary surface material consisting of asphaltic surface temporary according to standard spec 465.2, any grade of concrete according to standard spec 602.2, or alternative material as approved by the engineer. Gravel or base course material are not acceptable.

Furnish safety fence according to the following:

- Furnish notched conventional metal “T” or “U” shaped fence posts.
- Furnish fence fabric meeting the following requirements:
  - Color: International orange (UV stabilized)
  - Roll Height: 4 feet
  - Mesh Opening: 1 inch min to 3 inch max.
  - Resin/Construction: High density polyethylene mesh
  - Service Temperature: -60° F to 200° (ASTM D648)
  - Tensile Yield: Avg. 2000 lb per 4 ft. width (ASTM D638)

- Ultimate Tensile Strength: Avg. 3000 lb per 4 ft. width (ASTM D638)
- Elongation at Break (%): Greater than 100% (ASTM D638)
- Chemical Resistance: Inert to most chemicals and acids

C Construction

Maintain accessible bikeway on existing pavement, new pavement, or temporary surface material where shown on the plans or directed by the engineer.

Construct Safety Fence as follows:

- Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.
- Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.
- Overlap two rolls at a post and secure with wire ties.

C.1 Bikeway

Install, maintain, relocate (if necessary to accommodate work or operations), and remove temporary surface material at Brearly Street as shown on the plans and as directed by the engineer. Level and compact the surface prior to placing temporary surface material. The temporary bikeway shall have a minimum clear width of 8 feet; be located outside the immediate work area, as approved by the engineer; and meet the requirements of the current Americans with Disabilities Act Accessibility Guidelines (ADAAG). Install safety fence along both sides of the temporary bikeway. Provide a gap in the safety fence as necessary to provide access for construction vehicles across the temporary crosswalk. The maximum width of the gap shall be 18 feet. Reconstruct temporary bikeway access when disturbed by construction operations or utility trenches. Sweep temporary bikeway access daily. Maintain temporary bikeway access during allowable Brearly Street closures. Prevent motor vehicle from entering temporary bikeway.

D Measurement

The department will measure Temporary Bikeway Access by the day in service, acceptably completed. The measured quantity will equal the number of calendar days a bikeway through the work area is open to bicycle traffic. A bikeway is defined as an accessible two-way crossing of an intersection. Each day that the bikeway is out of service for more than 2 hours will result in 1 day being deducted from the quantity measured for payment.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.02	Temporary Bicycle Access	Day

Payment is full compensation for furnishing, loading, and hauling materials; for preparing the foundation; for furnishing, placing, maintaining, and removing temporary surface material; for reconstructing or relaying the temporary surface material; and for furnishing and installing, and maintaining safety fence.

33. Remove Bike Rack, Item SPV.0060.001.

A Description
This work consists of removal and disposal of existing bike racks as shown on the plans, and as herein provided. All racks are secured to concrete by bolts or embedded directly in the concrete.

Racks and all related material shall be removed from the right-of-way and disposed of by the contractor.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Remove Bike Rack by each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.001	Remove Bike Rack	Each

Payment is full compensation for removal and disposal of bike racks.

34. Provide and Install Bike Rack, Item SPV.0060.002.

A Description
This work shall consist of the furnishing and installing bike racks at the locations shown on the plans and as herein provided. Bike racks shall be installed on a 5" concrete pad. Contractor shall contact the engineer prior to installing the concrete pad to verify the size and the location of the concrete pad and bike rack.

B Materials
The capacity of the bike rack is to be determined by the number of looped down brackets; the end supports shall not count as locations to calculate capacity. Each bike rack location on the plans indicates the capacity of the rack to be installed at that location. All bike racks shall be galvanized steel. Acceptable 1 stall racks are: "Bike Hitch" made by Dero, "Post and Ring" made by Saris, or approved equal.

C Construction
Install bike racks with stainless steel bolt and anchor system according to manufacturer's instructions in locations shown on the plans.

D Measurement
The department will measure Provide and Install Bike Rack each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.002	Provide and Install Bike Rack	Each

Payment is full compensation for furnishing and installing bike racks.

35. Provide and Install Tree Grate, 4-ft x 8-ft, Item SPV.0060.003.

A Description
This work shall consist of the furnishing and installing tree grates as shown on the plans, details, and as herein provided.

B Materials
Tree grates shall be cast iron per ASTM A48 class 35b or better. Standard finish is raw cast grey iron. Tree grate shall be 4' by 8' square tree grate, ADA compliant, provide with angle frame and rebar. Casting shall be R-8713, Neenah Foundry Co. P.O. Box 729, 2121 Brooks Ave., Neenah, WI, 54957, (920) 725-7000 or COHO model tree grate, Urban Accessories, Inc, 465 East 15th Street, Tacoma WA 98421, 1 (877) 487-0488, or approved equal. Mulch shall be washed stone, 1 ½" diameter, free of fines and organic matter.

C Construction
Install tree grates according to manufacturer's instructions and as shown on the details to provide installation on a true, flat plane. Provide 3" depth of washed stone for the entire area of the tree grate. Install #4 steel reinforcement in adjacent curb per construction detail.

The contractor shall support the center of the tree grate for those that do not have trees to prevent them from being broken. Unsupported grates broken before tree planting occurs shall be the responsibility of the contractor to replace.

D Measurement
The department will measure Provide and Install Tree Grate, 4-ft x 8-ft by each individual unit, acceptably completed.

E. Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.003	Provide and Install Tree Grate, 4-ft x 8-ft	Each

Payment is full compensation for providing and installation of tree grates.

36. Root Pruning Existing Terrace Trees, Item SPV.0060.004.

A Description

This special provision describes pruning roots of existing terrace trees by hand or using a mechanical root cutting machine to allow for excavation; storm sewer, sanitary sewer or water main installation; and paving and curb and gutter operations.

B (Vacant)

C Construction

Preserve existing terrace trees not shown as being removed on the plans. Prune roots of existing terrace trees by hand or using a mechanical root cutting machine to allow for adjacent construction operations. Prune roots along the roadway side of the tree from drip edge to drip edge of the tree. Prune roots in the terrace from the back of curb and gutter to the face of sidewalk in areas of proposed sanitary and water utility lateral installations a minimum of 6 feet from the centerline the proposed utility trench. Roots shall not be pruned closer than 15 inches to any existing tree.

Cleanly cut roots by hand or by using a sharp clean carbide tipped rotary saw blade. If using a saw, disinfect the blade between cuts to avoid spreading disease. All root cuts shall be made smooth and clean to facilitate root regeneration. Tearing or ripping of roots is not acceptable. Removal of roots using a backhoe or endloader without proper root pruning is not acceptable.

Cover exposed tree roots with mulch and keep moist until backfilling is completed.

Backfilling of the area after removal of the roots shall be performed by the contractor as part of this item in accordance to the pertinent provisions of standard spec 207. Backfilling shall be done by use of hand implements within the dripline of terrace trees.

Dispose of tree roots in accordance to standard spec 201. Burning or burying of roots will not be permitted.

Do not conduct root pruning during bud break, shoot growth, or environmentally stressful times such as extreme drought or heat conditions.

D Measurement
The department will measure Root Pruning Existing Terrace Trees as each individual tree, acceptably root pruned in accordance to the contract.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.004	Root Pruning Existing Terrace Trees	Each

Payment is full compensation for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

37. Precast Sign Post Base, Item SPV.0060.005.

A Description
This special provision describes constructing and installing precast sign post bases at locations shown on the plans and as hereinafter provided.

B Materials
All materials furnished for the work shall meet the requirements for the class of materials named.

Specific reference is made to the following sections of the standard specifications:

Concrete Masonry	standard spec 501
Steel Reinforcement	standard spec 505

Concrete Masonry shall be of a 3,200-psi minimum strength in 28 days. The 2-inch x 24-inch +1/3-inch insert shall be an ASTMA Designation 120 A53 Fed Spec P404, Schedule 40 untreated black pipe 2-inch diameter, with a galvanized rigid conduit coupling installed.

C Construction
Form the 24-inch x 11-inch precast base in accordance to the details in the plan. Weld the coupling and pipe over 50 percent of the circumference. Center the insert in the base and plumb with the vertical axis of the base, and place so that the coupling is flush 1/8 inch with the top of the troweled surface of the base. The bottom of the insert extends a minimum of 1/8-inch below the base and shall remain open to permit drainage. Weld 3/8-inch by 8-inch reinforcing bar to the insert 8 inches from the top of the base and 8 inches from the bottom of the base to prevent the insert from rotating within the concrete base.

Set the signpost bases at the locations shown on the plans. The center of the finished installation shall be 2'6" + inches from the face of the adjacent curb.

Upon request and reasonable notice from the contractor, the engineer will establish and stake the location for the sign post bases. The City of Madison Traffic Engineering Division Staff will verify all signpost base locations.

Coat the threads of the pipe and coupling in the base with graphite grease prior to assembly. Install the base and pipe as a unit, level with the finished grade of the surrounding surface with the pipe plumb. Tamp the material used for backfilling around the base in 6-inch layers to ensure the installation will remain plumb. Provide a one-year warranty that the signpost base installation shall remain plumb.

Remove and dispose of all excess excavation, surplus material and debris resulting from operations and satisfactorily repair and restore other work damaged by operations.

D Measurement
The department will measure Precast Sign Post Base by each individual unit, installed and acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.005	Precast Sign Post Base	Each

Payment is full compensation for furnishing all materials; for the manufacture of the sign post base; for hauling, handling and installing the sign post base, including backfill.

38. Sign Post Base for Concrete Installation, Item SPV.0060.006.

A Description
This special provision describes constructing and installing the sign post bases in concrete sidewalk or pavement at locations shown on the plans and as hereinafter provided.

B Materials
The 2-inch x 16-inch sign post base shall be an ASTMA Designation 120 A53 Fed Spec P404, Schedule 40 untreated black pipe 2-inch diameter, with a galvanized rigid conduit coupling installed.

Waterproof anchoring cement for concrete shall be Unitex, Thorogrip 29/64 or equivalent.

C Construction
The sign post base shall consist of a 2-inch x 16-inch schedule 40 pipe with attached 2” rigid conduit galvanized coupling in accordance to the details in the plan. Weld the coupling and pipe over 100 percent of the circumference.

Set the signpost bases at the locations shown on the plans. The center of the finished installation shall be 5'0" (2'6" for Advanced Street Name Sign Special installations) from the face of the adjacent curb or from the edge of paved shoulder. Upon request and reasonable notice from the contractor, the engineer will establish and stake the location for the sign post bases. The City of Madison Traffic Engineering Division Staff will verify all signpost base locations.

Box out all installations in hard surfaced areas (concrete) with a round PVC pipe with a minimum diameter of 3-inches or installed by drilling or core drilling a 3-inch hole all the way through the concrete to the base material. If drilling in architectural concrete pavement, cover the surface prior to drilling to protect the surface from drilling slurry. Coordinate all box out locations. With a temporary pipe 4 to 5 feet long, hand-tighten it into the insert. Drive the insert into the base material at a level/plumb position until the insert is flush with the top of the concrete. Shim insert to a level/plumb position with lag bolts or p.k. nails. All shims must be set below the concrete/insert. Remove temporary pipe, replace with permanent pipe, and tighten into insert with large pipe wrench until insert turns. Reset shims or add shims until pipe no longer turns. Retighten pipe and recheck level/plumb/top of concrete with insert. Patch concrete with a waterproof anchoring cement for concrete. Mix patch to a liquid consistency, not a paste. Pour patch until it is flush with the top of the insert. Recheck level/plumb/top of concrete with insert immediately due to fast setting time of cement. Additional cement may be required as it settles. Completed installation shall be level/plumb, solid, and able to support required sign post and signs. Patch shall be flush with adjacent concrete without exposed shims.

Coat the threads of the pipe and coupling in the base with graphite grease prior to assembly. Install the base such that the installed sign post will be plumb. Provide a one-year warranty that the signpost base installation shall remain plumb.

Remove and dispose of all excess excavation, surplus material and debris resulting from operations and satisfactorily repair and restore other work damaged by operations.

D Measurement

The department will measure Sign Post Base for Concrete Installation as each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.006	Sign Post Base for Concrete Installation	Each

Payment is full compensation for furnishing all materials; for the manufacture of the sign post base; for hauling, handling and installing the sign post base, including drilling holes in concrete; and anchoring cement.

39. Erecting City-Owned Signs Type II, Item SPV.0060.007.

Erect city-owned signs in accordance to the requirements of standard spec 638, except that the City of Madison will furnish the signs.

40. Temporary Bus Stop Pad, Item SPV.0060.008.

A Description

This special provision describes furnishing, maintaining, moving, and removing temporary pavement for Temporary Bus Stop Pads in the terrace, as shown on the plans.

B Materials

Furnish asphaltic surface temporary in accordance to standard spec 465.2 (2) or furnish concrete in accordance to standard spec 602.2.

Furnish safety fence according to the following;

- Furnish notched conventional metal "T" or "U" shaped fence posts.
- Furnish fence fabric meeting the following requirements:
- Color: International orange (UV stabilized)
- Roll Height: 4 feet
- Mesh Opening: 1 inch min to 3 inch max
- Resin/Construction: High density polyethylene mesh
- Service Temperature: -60° F to 200° (ASTM D648)
- Tensile Yield: Avg. 2000 lb per 4 ft. width (ASTM D638)
- Ultimate Tensile Strength: Avg. 3000 lb per 4 ft. width (ASTM D638)
- Elongation at Break (%): Greater than 100% (ASTM D638)
- Chemical Resistance: Inert to most chemicals and acids

C Construction

Construct temporary bus stop pads 10 feet long by 6 feet wide (or the width of the terrace) that meet the requirements of the current Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Form the foundation by excavating at least 3 inches. Tamp or compact the foundation to ensure stability.

Place 3 inches of Asphaltic Surface Temporary in accordance to standard spec 465.3.1 or place four inches of concrete in accordance to standard spec 602.3.2.3, and as shown in the plan.

Construct safety fence to delineate Temporary Bus Stop Pad and provide separation from the work zone as follows:

- Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.
- Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.
- Overlap two rolls at a post and secure with wire ties.

Reconstruct or move temporary bus stop pads if required for utility installation or paving operations.

Temporary bus stop signs and poles will be furnished and installed by Madison Metro.

D Measurement
The department will measure Temporary Bus Stop Pad by each individual unit, acceptably installed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.008	Temporary Bus Stop Pad	Each

Payment is full compensation for furnishing and installing all materials; for constructing; for reconstructing or moving; for removing; for furnishing and installing safety fence.

41. Bus Stop Bench, Item SPV.0060.009.

A Description
Furnish and install Bus Stop Bench in accordance to these requirements, the manufacturer's recommendations and as shown in the plans. Install at the location indicated in the plan set.

B Materials
Furnish benches that have ductile iron end frames, and scrolled steel slats that are formed from ¼" x 1½" solid steel bars and have a one-inch gap between slats. The scrolled steel slats shall be welded to cross members of 1-7/8" tubular steel. Use a 1-5/16" tubular steel rung for additional support. All fabricated components shall be galvanized, steel shot blasted, etched, phosphatized, preheated and electrostatically powder-coated. Benches shall be color RAL 9004 Glossy (80-90% gloss).

C Construction
Coordinate with the following item of work: Concrete Sidewalk 7-Inch.

Submit a manufacturer's color sample for approval by engineer before placing order for materials.

Mount benches on concrete pavement in accordance to manufacturer's instructions using four stainless steel anchor bolts, with tamper-proof heads, 3/8" diameter x 4" length. Use recessed, threaded, stainless steel expansion anchors as sidewalk inserts.

Field-verify each bench location; obtain approval from the engineer for any field adjustment required prior to placement. Install benches level and plumb and shimmed where required.

D Measurement
The department will measure Bus Stop Bench by each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.009	Bus Stop Bench	Each

Payment is full compensation for furnishing and installing all materials.

42. Utility Line Opening (ULO), Item SPV.0060.010.

A Description
Excavate and uncover utilities for the purposes of determining elevation and potential conflicts, as shown on the plans or as directed by the engineer, and as hereinafter provided.

B (Vacant)

C Construction
The excavation will be done in such a manner that the utility in question is not damaged and the safety of the workers is not compromised.

The utility line openings will be performed as soon as possible and at least 10 days in advance of proposed utility construction to allow any conflicts to be resolved with minimal disruption. Where utilities are within 5 feet of each other at a potential conflict location, only one utility line opening will be called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Utility line openings will include a trench up to 5 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

All utility line openings will be approved and coordinated with the engineer. The utility engineers or their agents will be notified of this work a minimum of 3 days prior to the work so they may be present when the work is completed. The need for performing ULO's as shown on the plans will be verified since some of the utilities may have been relocated prior to the start of construction.

Replace pavement open to traffic within 24 hours of the excavation.

D Measurement

The department will measure Utility Line Opening (ULO) by the unit, acceptably completed. Where utilities are within 5' of each other at a potential conflict location, only one utility line opening will be measured.

E Payment

The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.010	Utility Line Opening (ULO)	Each

Payment for Utility Line Opening is full compensation for the excavation required to expose the utility line, backfilling with existing material removed from the excavation, compacting the backfill material, and for restoring the site, cleanup.

Existing pavement, concrete curb, gutter, and sidewalk removals necessary to facilitate utility line openings will not be considered part of or paid for under Utility Line Openings, but will be considered separate and measured and paid for separately as removal items. Replacement pavement, concrete curb, gutter, and sidewalk items will also be considered separate from Utility Line Openings and will be measured and paid for separately.

43. Reconnect Storm Sewer Laterals, Item SPV.0060.011.

A Description

This special provision describes reconnecting existing storm sewer laterals to new structures or existing pipe.

B (Vacant)

C Construction

Identify all private laterals in existing structures and verify elevations prior to that structure's removal and ordering of any precast structures. Remove existing lateral pipes to the right-of-way and replace in-kind. Verify that positive drainage is achieved when connecting to the new inlet or curb outlet structure. The contractor will be allowed to salvage any structurally sound pipe that was removed with prior approval by the engineer. Connect the existing pipes to the new pipes with the appropriate coupling, concrete collar or by means approved by the engineer. Concrete masonry for concrete collar shall be in accordance to standard spec 501. Any additional pipe or materials required to reconnect the storm sewer laterals shall be considered incidental to this bid item.

D Measurement
The department will measure Reconnect Storm Sewer Laterals by each lateral connected, acceptably completed.

E Payment
The department will pay for measure quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.011	Reconnect Storm Sewer Laterals	Each

Payment is full compensation for performing all work; removal of existing pipes, furnishing and installing all materials, couplings, concrete collars, and pipe.

44. Storm Sewer Tap, Item SPV.0060.012.

A Description
This special provision describes tapping various sized storm sewer pipes or culverts into existing structures, including manholes and inlets, or other pipes as detailed on the plans, using Grade A concrete. However, water levels fluctuate in the existing pipes or box culvert and contractor may encounter water levels above flow line of the proposed storm sewer pipe. If this is the case, the contractor shall also comply with standard spec 502.3.5.3. The tapped pipe shall be left flush with the interior wall of the existing pipe. Tuck-point and seal the tap inside and outside using approved mortar as described in the Special Provisions, "General Provisions for Storm Sewer".

B (Vacant)

C Construction
The work under these items shall be in accordance to the provisions of standard spec 611, as shown on the plans and as provided herein.

D Measurement
The department will measure Storm Sewer Tap by each individual unit acceptably completed, regardless of size and regardless of whether or not a box out exists.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.012	Storm Sewer Tap	Each

Payment for Storm Sewer Tap, is full compensation for tapping the hole; connection of the pipe (pipe paid separately); furnishing and placing concrete.

45. Sewer Electronic Markers, Item SPV.0060.013.

A Description

Work under this item includes installing Sewer Electronic Markers in accordance to Article 503.2 of the City of Madison Standard Specification for Public Works Construction- Latest Addition. These sewer electronic markers will be installed where called for on the plan set above sanitary sewer and storm sewer facilities.

B Materials

All materials are described in Article 503.2(f) of the City of Madison Standard Specification for Public Works Construction- Latest Addition. Markers will be provided by the City of Madison.

C Construction

Install Sewer Electronic Markers(sanitary) in accordance to Article 503.2(f) of the City of Madison Standard Specifications for Public Works Construction– Latest Edition.

For storm sewer, place a marker ball for each storm tap located above the connection on the storm sewer main, as shown on plans. Place the marker ball so the marker ball will be no deeper that 4.5-feet below finished grade and directly above the storm lateral. If the location of the lateral is below 4.5 feet from finished grade, partially backfill trenches prior to placement of the marker ball at the desired locations.

Notify the engineer when marker balls are installed. Each marker ball will be tested by the city after completion of final pavement surface to confirm that it is installed and functioning properly. If it is not installed or functioning, excavate to expose the existing marker ball or lateral and place a new marker ball. No additional compensation will be provided for this work.

D Measurement

The department will measure Sewer Electronic Markers as each individual sewer electronic marker, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.013	Sewer Electronic Markers	Each

Payment for Sewer Electronic Markers is full compensation for furnishing all work, materials, labor and incidentals required to complete the installation and all associated work to provide a complete functioning system. The department will not pay for replacing those marker balls that are non-functional. Balls will be provided by the City of Madison.

46. Inlet 2x3-ft Special, Item SPV.0060. 014.

Perform the work under this item in accordance to the applicable provisions of standard spec 611 and as detailed.

47. Inlet Cover Type H Special, Item SPV.0060.015.

Perform the work under this item in accordance to the applicable provisions of standard spec 611 and as detailed.

48. Inlet Cover Type H-S Special, Item SPV.0060.016.

Perform the work under this item in accordance to the applicable provisions of standard spec 611 and as detailed

49. Inlet Covers Terrace Type 3 Special, Item SPV.0060.017.

Perform the work under this item in accordance to the applicable provisions of standard spec 611 and as detailed.

50. Terrace Inlet Type 3 Special, Item SPV.0060.018.

Perform the work under this item in accordance to the applicable provisions of standard spec 611 and as detailed.

51. Catch Basin Special, Item SPV.0060. 019.

Perform the work under this item in accordance to the applicable provisions of standard spec 611 and as detailed.

52. Manhole Cover Type J Special, Item SPV.0060. 020.

A. Description
Furnish and install metal frames, grates and lids in accordance to standard spec 611, as shown on the plans, and as hereinafter provided.

B Materials
Furnish castings in accordance to standard spec 611 and Article 507 of the City of Madison Standard Specifications for Public Works Construction-Latest Edition and the details shown on the plans. Lids furnished with logo per Madison Standard Specifications for Public Works Construction-Latest Edition Standard Detail Drawing 5.7.16.

C Construction
Install castings in accordance to standard spec 611.

D Measurement
The department will measure Manhole Covers Type J Special as each individual manhole cover, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.020	Manhole Covers Type J Special	Each

Payment is full compensation for providing new covers, including frames, lids, and all other required materials; for installing and adjusting each cover. Old covers removed remain the property of the municipality.

53. Fluid Thermal Backfill, Item SPV.0060.021.

A Description
Work under this bid item will include placing Fluid Thermal Backfill around ATC's 69KV lines located on East Johnson Street in order to install the proposed sanitary sewer, storm sewer and water main improvements. This bid item is intended to be utilized by each of the city utilities proposing crossings of the ATC's existing 69KV line included mainline and laterals.

B Materials
The slurry will conform to the following one (1) cubic yard mix:

30 lb	Type I Portland Cement
240 lb	Class C Fly Ash
1870 lb	Medium Aggregate (3/8" pea gravel)
1570 lb	Concrete Sand – 4100 (ASTM C-33)
320 lb	Water
200 psi	Compressive Strength (28 days)

Notes:
1. No air entraining agent will be allowed to be used with the mix design.
2. All design aggregate batch weights are saturated surface dry.
3. Aggregate batch weights will be adjusted for free moisture at time of mixing.
4. Admixture quantity may be varied within manufacturers recommended dosage to provide desired results.

Use suppliers of Fluid Thermal Backfill that have been previously approved by ATC or an approved equal. Obtain ATC's approval of other suppliers prior to supplying the mix. Approved suppliers of Fluid Thermal Backfill include:

Wingra Redi-Mix Inc;
P.O. Box 44284
2975 Kapec Rd
Madison, WI 53744
Web Site: www.wingrastone.com
Central Dispatch Tel.: (608) 271-9388
Toll Free Tel.: (800) 249-6908
ATC Approved Thermal Flowable Backfill: Wingra Mix No. 912

Lycon, Inc.;
1110 Harding Street
Janesville, WI 53545
Tel.: (608) 754-7701 / (800) 262-8604
Web Site: www.lyconinc.com
14 plants in South Central Wisconsin
Central Dispatch Tel.: (608) 251-0073
Toll Free Tel.: (800) 955-8758 / (800) 955-7702
ATC Approved Thermal Flowable Backfill: Lycon Prod. # 956087S (M&M #748)

Prairie Materials
12005 West Hampton Avenue
Milwaukee, WI 53225
Phone: (414) 258-1985 / (414) 258-7000
Fax: (414) 258-4960
Website: www.prairie.com
ATC Approved Thermal Flowable Backfill: Prairie Materials Mix No. MX10386

C Construction

Work will be completed in accordance of ATC's utility crossing requirements. Mix design and installation method will be in accordance to the materials section or ATC's requirements.

Each concrete truck will provide a batch mixture ticket prior to material placement. If a truck driver does not have the batch mixture ticket, that load will be rejected. During and prior to placement, take all necessary precautions not allow the Fluid Thermal Backfill material to segregate.

Remove all debris and standing water from the trench prior to the placement of the Fluid Thermal Backfill.

If the Fluid Thermal Backfill is being placed around coated pipes, do not dump material directly on the pipe; use a baffle, such as a sheet of plywood or similar method, to deflect the fill material.

Use appropriate methods to eliminate the occurrence of air voids around duct banks. If vibration is used, do so in a manner such that the vibration does not affect the integrity of conduit, pipe or cable system and that there is no segregation of the materials.

Prior to installing the Fluid Thermal Backfill, ensure that the conduits/pipes are suitably anchored so that they do not float.

Remove any shoring or sheeting from the trench no later than one hour after the Fluid Thermal Backfill has been placed so that the material is still in a semi-fluid state.

If freezing temperatures are expected to occur during the placement or curing of the Fluid Thermal Backfill implement any necessary precautions to prevent the material from freezing.

D Measurement

The department will measure Fluid Thermal Backfill by each unit constructed, acceptably completed. The amount of Fluid Thermal Backfill is estimated to be one cubic yard per crossing. Any additional Fluid Thermal Backfill used will be considered incidental to the contract unit bid price. No extra compensation will be granted for alternate mix design/backfill installation method called for by ATC.

E Payment

The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.021	Fluid Thermal Backfill	Each

Payment is full compensation for furnishing all excavation; disposing of excess material; and for furnishing and placing backfill.

54. Sanitary Lateral Reconnect, Item SPV.0060.022.

A Description

This special provision describes sanitary sewer lateral connections encountered during the course of this project that connect to the sanitary sewer main.

B Material

Furnish sanitary sewer pipe and fittings that are solid-wall Poly Vinyl Chloride (PVC) and that conform to the requirements of the Specification for PVC Sewer Pipe and Fittings, ASTM D 3034.

Provide sanitary sewer pipe and fittings having a standard dimension ratio of 26 or 35 depending on the depth of the pipe. Sewer lateral pipe and fittings deeper than 12’ will have ASTM D3034 SDR 26 pipe.

Provide fittings conforming to the requirements of the American National Standard for Ductile- Iron and Gray-Iron fittings for Water and other liquids, ASA A21.10 (AWWA C110) where the sewer main being installed is Pressure Sanitary Sewer Pipe (SPV.0090.013 Sanitary Sewer Pressure Pipe (C900), 8-Inch or SPV.0090.014 Sanitary Sewer Pressure Pipe (C900), 16-Inch).

Furnish elastomeric or solvent cement joints made as recommended by the manufacturer.

C Construction
The pipe for the permanent connection of laterals is not to exceed a length of 5 feet.

Install risers, where necessary, in accordance to Standard Detail Drawing 5.3.1 of the City of Madison Standard Specifications for Public Works Construction- Latest Edition. Risers five feet in length are included in the bid item Sanitary Lateral Reconnect. Backfill and compaction in accordance to Article 202.3(b) of the City of Madison Standard Specifications for Public Works Construction-Latest Edition utilizing select fill.

D Measurement
The department will measure Sanitary Lateral Reconnect as each individual sanitary sewer reconnect, acceptably completed.

Sanitary sewer lateral pipe exceeding five feet in length will be paid under bid item Sanitary Sewer Lateral (Bid Item SPV.0090.010, Sanitary Sewer Lateral).

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.022	Sanitary Lateral Reconnect	Each

Payment is full compensation for furnishing all materials, including fill material; plugging the ends of all sewer mains and sewer laterals; excavation; trimming and chipping; cutting, protecting or removing reinforcing steel; disposal of surplus materials from the structure or excavation; excavation and compaction of the backfill material; restoring the site.

55. Sanitary Sewer Tap, Item SPV.0060.023.

A Description
Work under this item includes the connection of a new lateral or main to an existing structure and the connection of an existing lateral or main to a new structure.

B Materials
Provide Kor-n-Seal flexible connector, or approved equal, in the tapped hole, in accordance to Standard Detail Drawing 5.7.31 of the City of Madison Standard Specifications for Public Works Construction- Latest Edition.

C Construction

C.1 New Pipe to Existing Structure

Use a portable coring drill to produce a pipe opening that is round, clean and free of any pitting of the concrete.

Make a watertight connection of the pipe to the sewer access structure with a Kor-n-Seal-flexible connector, or approved equal, in accordance to Standard Detail Drawing 5.7.31 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C2. Existing Pipe to New Structure

Provide a flexible connector to connect the existing pipe to any new pipe which is required to make the connection to the structure.

Provide PVC (SDR-26, SDR-35, AWWA C900) that matches the existing pipe's diameter, or the next larger diameter, to reconnect the existing sewer main or lateral. The PVC (SDR-26, SDR-35, AWWA C900) sanitary sewer pipe is considered incidental to this bid item.

The pouring and construction of concrete benches and flowlines in new sewer access structures for the inlet or outlet pipes is not included in this bid item and is considered incidental to the bid item Sanitary Sewer Access Structure (4-Foot Diameter or 5- Foot Diameter).

The downstream pipe connection to a Sewer Access Structure (4-Foot Diameter or 5- Foot Diameter) is considered incidental to the Sewer Access Structure (4-Foot Diameter or 5- Foot Diameter).

D Measurement

The department will measure Sanitary Sewer Tap as each individual sanitary sewer tap, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.023	Sanitary Sewer Tap	Each

Payment is full compensation for providing and installing all connectors; and for coring.

56. Temporary Sanitary Sewer Connection, Item SPV.0060.024.

A Description

This special provision describes providing a temporary sanitary sewer main connection to existing sanitary sewer. A temporary connect is a connection that is needed to provide temporary sanitary service to the sanitary sewer mainline during staging and phasing of the sanitary sewer construction as part of the overall project. This bid item shall not be used for temporary sanitary lateral connections.

B Materials

Furnish all materials needed for the temporary connection in accordance to Article 503 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition. Flexible corrugated piping may be utilized as a temporary connection but may not be left in place as a permanent pipe connection.

C Construction

C.1 New Pipe to Existing Structure

Use a portable coring drill to produce a pipe opening that is round, clean and free of any pitting of the concrete.

Make a watertight connection of the pipe to the sewer access structure with a flexible connector in accordance to Standard Detail Drawing 5.7.31 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C.2. Existing Pipe to New Structure

Provide a flexible connector to connect the existing pipe to any new pipe which is required to make the connection to the structure.

Provide PVC (SDR-26 or SDR-35) that matches the existing pipe's diameter, or the next larger diameter, to reconnect the existing sewer main or lateral. The PVC (SDR-26 or SDR-35) sanitary sewer pipe is considered incidental to this bid item.

The pouring and construction of concrete benches and flowlines in new sewer access structures for the inlet or outlet pipes is not included in this bid item and is considered incidental to the bid item Sanitary Sewer Access Structure.

The downstream pipe connection to a Sanitary Sewer Access Structure is considered incidental to the Sanitary Sewer Access Structure.

Provide a temporary connection at the locations to be determined and approved by the City of Madison in accordance to Article 503 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C.3 New Pipe to New Pipe

Provide jointing materials which conform to the requirements specified in Article 503.2 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition, for the type of pipe being installed.

Prior to making joints, inspect jointed surfaces for chips, cracks, or other defects in the joints and jointing materials. Clean and lubricate jointing surfaces with a vegetable lubricant or a lubricating adhesive. Apply lubricant to both the bell and spigot surfaces of the joint.

Provide proper alignment and proper grade prior to applying the pressure necessary to make the joint.

C.4 New Pipe to Existing Pipe

Couple the junction of a new pipe to an existing pipe as required in the field by the City of Madison. Saw cut the existing main to accommodate a clean joint for the installation of the compression couplings. Placed the coupling as directed by the City of Madison and per Standard Detail Drawing 5.3.3, Coupling Details, from the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

D Measurement

The department will measure Temporary Sanitary Sewer Connection as each individual temporary sanitary sewer connection, acceptably completed.

Work associated with lateral connections and taps will be measured separately (Sanitary Lateral Reconnect, Bid Item SPV.0060.022 And Sanitary Sewer Tap, Bid Item SPV.0060.023). Select fill for piping for the temporary sanitary sewer connections will be considered incidental to the temporary sanitary sewer connection.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.024	Temporary Sanitary Sewer Connection	Each

Payment is full compensation for excavating, backfilling, and compacting; removal and disposal of temporary sanitary sewer connections; making all connections and disposing of surplus materials. Permanent connection to an existing sanitary sewer will be paid under bid item sanitary sewer tap for a connection to a Sewer Access Structure (Sanitary Sewer Tap, Bid Item SPV.0060.023) or sanitary lateral to a sewer main (Sanitary Lateral Reconnect, Bid Item SPV.0060.022).

57. Sanitary Sewer Access Structure (4-Foot Diameter), Item SPV.0060.025.

A Description

Work under this item includes installing Sewer Access Structures at the depths and locations shown on the plan.

B Materials

Provide precast concrete Sanitary Sewer Access Structure (4-Foot Diameter) meeting the requirements of Standard Detail Drawing 5.7.2, 5.7.15, and Article 507.3 of the

City of Madison Standard Specifications for Public Works Construction – Latest Edition.

Furnishing and installing Sewer Access Structure Frames and Covers, in accordance to Standard Detail Drawing 5.7.16 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition, will be paid for separately under the Manhole Covers Type J Special, Bid Item SPV.0060.020.

C Construction

Install Sanitary Sewer Access Structure (4-Foot Diameter) in accordance to Article 507.3 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. Maintain the normal flow of wastewater at all times during installation of the new sanitary sewer access structure and when connecting pipes to the new structure. All bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the normal flow of wastewater throughout construction, is incidental to this bid item.

Construct concrete benches and flow lines as directed by the City of Madison or as directed by the engineer.

D. Measurement

The department will measure Sanitary Sewer Access Structure (4-Foot Diameter) as each individual sanitary sewer access structure, acceptably completed.

E. Payment

The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.025	Sanitary Sewer Access Structure (4-Foot Diameter)	Each

Payment is full compensation for constructing benches and flow lines; for furnishing and installing all bypass or temporary piping and connections.

58. Sanitary Sewer Internal Chimney Seal, Item SPV.0060.026.

A Description

Furnish and install an internal chimney seal on all sanitary sewer access structures located within 100 feet of a street low point, in greenways, and where indicated on the plan.

B Materials

Provide an internal chimney seal consisting of either rubber with metal bands or a low density polyethylene insert conforming to the City of Madison Standard Detail Drawing 5.7.17 – SAS Internal Chimney Seal or other equivalent chimney seal products as approved by the engineer.

C Construction
Install internal chimney seals in accordance to the manufacturer's instructions.

D Measurement
The department will measure Sanitary Sewer Internal Chimney Seal as each individual sanitary sewer internal chimney seal, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.026	Sanitary Sewer Internal Chimney Seal	Each

Payment is full compensation for furnishing all labor, tools, materials, and all other work incidental to the installation of the sanitary internal chimney seal.

59. Sanitary Sewer Cleanout, Item SPV.0060.027.

A Description
Work under this item includes installing sanitary sewer cleanouts on laterals in the locations as called for by the engineer. This bid item will be necessary when sewer laterals cannot be routed around an obstruction in the right-of-way with 22.5 degree bends. There are not cleanouts called for on plan set.

B Materials
Provide a lateral cleanout conforming to the requirements called for in Article 507.2 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

C Construction
Install sanitary sewer cleanout in accordance to Article 507.3 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. Maintain the normal flow of wastewater at all times during installation of the new sanitary cleanout. All bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the normal flow of wastewater throughout construction, is incidental to this bid item.

The contractor will need have prior approval of the engineer to install Cleanout and selected location of the cleanout. It is anticipated that the vast majority of laterals will be installed in accordance the sanitary sewer lateral (Bid Item SPV.0090.010, Sanitary Sewer Lateral) where bends of 45 degrees will be made with (2)22.5 degree bends with a two feet of straight pipe between the bends.

D Measurement
The department will measure Sanitary Sewer Cleanout as each individual installed unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.027	Sanitary Sewer Cleanout	Each

Payment is full compensation for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work.

60. Remove Cleanout, Item SPV.0060.028.

A Description
This special provision describes removing Cleanout(standpipe) as shown on the plans. The work includes salvaging and disposing of the resulting materials and backfilling the trenches with select fill.

B Materials
Provide select fill meeting the requirements of Article 203.2 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition; furnishing and placing select fill in void created by the structure removal is included with this bid item.

C Construction
Remove cleanout structures in accordance to Article 203.2(a) of the City of Madison Standard Specifications for Public Works Construction - Latest Edition. Sewer mains and laterals that are connected to removed cleanouts will be plugged incidental to the removal of the cleanout. Payment for Concrete Slurrying of an entire sewer main or lateral will be paid for separately under Abandon Sanitary Sewer with slurry (Bid Item SPV.0035.01, Abandon Sanitary Sewer With Slurry).

D. Measurement
The department will measure Remove Cleanout as each individual removed cleanout, acceptably completed.

E. Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.028	Remove Cleanout	Each

Payment is full compensation for furnishing all materials, including fill material; for disposal of surplus materials; excavation and compaction of select fill material; and for restoring the site.

61. Remove Sanitary Sewer Structure, Item SPV.0060.029.

A Description

This special provision describes removing sanitary sewer access structures as shown on the plans. The work includes salvaging and disposing of the resulting materials and backfilling the trenches with select fill.

B Materials

Provide select fill meeting the requirements of Article 202.2 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition; furnishing and placing select fill in void created by the structure removal is included with this bid item.

C Construction

Remove sanitary sewer access structures in accordance to Article 203.2(a) of the City of Madison Standard Specifications for Public Works Construction - Latest Edition. Sewer mains and laterals that are connected to a removed Sanitary Sewer Access Structure will be plugged with a concrete plug incidental to the removal of the structure. Payment for Concrete Slurrying of an entire sewer main or lateral will be paid for separately under Abandon Sanitary Sewer with slurry (Bid Item SPV.0035.01 Abandon Sanitary Sewer With Slurry).

D Measurement

The department will measure Remove Sanitary Sewer Structure as each individual remove sanitary sewer structure, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.029	Remove Sanitary Sewer Structure	Each

Payment is full compensation for furnishing all materials, including fill material; for disposal of surplus materials; excavation and compaction of select fill material; and for restoring the site.

62. Adjust Sewer Access Structure Special, Item SPV.0060.030.

A Description

Work under this item will include adjusting Sanitary Sewer Access Structure (SAS) castings as called for on the plan set to the final proposed grades. This bid item is required because the casting adjustment is greater than 9” of vertical adjustment to set the casting to the final grade or the chimney was determined to be in poor condition. Manhole adjustments less than 9” will be paid for separately under Bid Item 611.811 Adjusting Manhole Covers. Installation of offset cone and casting as called for on the plan will be considered incidental to this bid item. Rotation of an existing cone sections will be considered incidental to this bid item.

B Materials
Precast concrete barrel sections and manhole adjustment rings will meet the requirements of Article 507.3, as well as SDD 5.7.2 and 5.7.15 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

C Construction
Adjust SAS Special will be completed in accordance to Article 507.3 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. This bid item will require adjustment rings to be removed and concrete barrel sections to be installed. The maximum allowed adjustment on the Sewer Access Structure will not exceed 9 inches and the final configuration of the structure will be in accordance of SDD 5.7.2 and 5.7.15 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. If the sewer access structure being adjusted is a poured in place structure (4 x 4, 5 x 5 , or 6 x 6), a 4' diameter barrel section will be installed on the poured in place manhole rooftop and a concrete collar will be placed where the barrel section connects to the manhole rooftop. The barrel section will be centered over the casting opening. If the existing casting is offset, the manhole rooftop will be sawcut to create an opening centering the barrel section on the manhole rooftop.

Where pin type castings are encountered, furnishing and installing Sewer Access Structure Frames and Covers, in accordance to Standard Detail Drawing 5.7.16 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition, will be paid for separately under the Manhole Covers Type J Special, Bid Item SPV.0060.020.

D Measurement
The department will measure Adjust Sewer Access Structure Special as each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.030	Adjust Sewer Access Structure Special	Each

Payment is full compensation for each sanitary sewer access structure satisfactorily installed in accordance to Article 507 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. Sawcutting the roof, installing mastic and concrete collars will be considered incidental to this bid item.

63. Abandon Sanitary Sewer - Pipe Plug, Item SPV.0060.031.

A Description
This work consists of plugging pipes as shown in the plans and hereinafter provided.

B Material
Provide concrete conforming to Article 301 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition

C Construction
Abandon sanitary sewer pipe with a plug in accordance to Article 203 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Provide replacement sanitary sewers and laterals or appropriate bypass pumping prior to abandoning sanitary sewer pipe.

Saw cut end of existing pipe and clean interior of pipe to create a good bonding surface. Form and pour a minimum 1-FT deep concrete plug completely filling the opening of the pipe.

Where structures are called out for removal or abandonment, plug pipes at the structure will be considered incidental to removal or abandonment of the manhole

Any plugs required to abandon the existing sanitary main where laterals are being extended will be considered incidental to sanitary sewer lateral (Bid Item SPV.0090.10 Sanitary Sewer Lateral). Concrete Slurrying of an entire sewer main or lateral will be paid for separately under Abandon Sanitary Sewer with slurry (Bid Item SPV.0035.01, Abandon Sanitary Sewer With Slurry) or Pipe Plug (Bid Item SPV.0060.031 Abandon Sanitary Sewer - Pipe Plug).

D Measurement
The department will measure Abandon Sanitary Sewer - Pipe Plug as each individual pipe plug, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.031	Abandon Sanitary Sewer- Pipe Plug	Each

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work.

64. Reconstruct Bench and Flowlines, Item SPV.0060.032.

A Description
Work under this item includes the removal and replacement of the existing sewer access structure's bench and flowline(s) as indicated in the drawings, or as required by the City of Madison, to restore the bench and flow line after completion of a tap connection as described under Sanitary Sewer Tap bid item (Bid Item SPV.0060.023 Sanitary Sewer Tap).

B Materials
Furnish concrete materials in accordance to the applicable provisions of standard spec 611.

C Construction
Notify the city of Madison of any potential restoration work and provide a minimum of three working days for completion of a field assessment of the structure in question. Unless shown on the drawings, do not reconstruct bench and flowlines unless directed by the City of Madison.

Complete all work associated with this item in accordance to Article 503 of the City of Madison Standard Specifications for Public Works Construction - Latest Addition. Provide a smooth trowel finish to all completed flowlines. Brushed flowlines will not be accepted.

D Measurement
The department will measure Reconstruct Bench and Flowlines as each individual reconstruct bench and flowline, acceptably completed.

E Payment
The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.032	Reconstruct Bench and Flowlines	Each

Payment is full compensation for disposing of surplus materials; and for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work.

65. Pipe Supports, Item SPV.0060.033.

A Description
Work under this item will include installing 2 concrete pipe supports as shown on the plans or as directed by the engineer. This item is needed when the vertical clearance between pipes is less than 12".

B Materials
Pipe Supports shall meet the requirements of Standard Detail Drawing 5.8.1 and Article 508.1(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

C Construction
Pipe Supports will be installed in accordance to Article 508.1(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

D Measurement
The department will measure Pipe Supports as each unit for support of each pipe being supported, acceptably completed. Each Pipe Support will have 2 vertical concrete blocks.

E Payment
The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.033	Pipe Supports	Each

Payment is full compensation for each set of pipe supports satisfactorily furnished and installed in accordance to Article 508 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

66. Install Compression Coupling, Item SPV.0060.034.

A Description
This special provision describes a permanent sanitary sewer connection of the proposed sewer main to existing sanitary sewer main.

B Materials
Provide select fill meeting the requirements of Article 503.3(f) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition for select fill for sanitary sewer mains and laterals.

C Construction
Install Compression Couplings in accordance to all applicable provisions of Article 503.3(f) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. If the compression coupling is a proposed sewer main to an existing sewer main, the pipe slope of the proposed sewer main will match the slope of the existing sewer pipe.

D Measurement
The department will measure Install Compression Coupling as each individual compression couplings installed, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.034	Install Compression Coupling	Each

Payment is full compensation for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work.

67. Slurry Backfill, Item SPV.0060.035.

A Description

Work under this item will include all work, materials, equipment, and incidentals required to install dig-able slurry backfill where proposed sewer mains or laterals cross an existing duct packages (electrical or telephone). This bid item will only be utilized if the vertical separation between the top of the proposed lateral or main and bottom of the duct being crossed is less than 12" and where pipe supports are not called out on the plan set (SPV.0060.033 Pipe Supports). This bid item is intended for locations where the existing duct packages or conduit are larger diameter (24" or larger) where hand digging (tunneling) is utilized to install the proposed utility.

B Materials

The slurry will conform to the following one (1) cubic yard mix:

25 lb	Type I Portland Cement
300 lb	Class C Fly Ash
2700 lb	Sand
50 gallons	Water

C Construction

Slurry backfill will be installed from the bottom of trench to the bottom the existing duct package being crossed. Select backfill (Bid Item SPV.0090.17 Select Fill For Sanitary Sewer) will be used to backfill from the top of the slurry to the finished grade on both sides of the duct being crossed. Slurry backfill will be allowed to completely dry before select backfill is placed.

D Measurement

The department will measure Slurry Backfill by each completed unit, acceptably completed, for each existing duct package being crossed that has less 12" of vertical clearance where tunneling is required to install the proposed utility. The amount of slurry backfill is estimated to be one cubic yard per crossing. Any additional Slurry Backfill used will be considered incidental to the contract unit bid price. No extra compensation will be granted for alternate dig-able flowable mix design. Select Fill sewer lateral or main (Bid Item SPV.0090.017 Select Fill For Sanitary Sewer) will still be paid for the full length of the pipe being installed.

E Payment

The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.035	Slurry Backfill	Each

Payment is full compensation for furnishing all excavation; disposing of excess material; furnishing and placing backfill.

68. Remove Inside Drop, Item SPV.0060.036.

A Description
This special provision describes removing the inside drop as shown on the plans.

B Materials
Provide concrete conforming to Article 301 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition

C Construction
Remove inside drop in accordance to Article 203.2(a) of the City of Madison Standard Specifications for Public Works Construction - Latest Edition. The remaining holes left from either a sewer main or lateral connected to the sewer access structure will be plugged incidental to the removal of the drop.

D Measurement
The department will measure Remove Inside Drop as each individual removed inside drop, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.036	Remove Inside Drop	Each

Payment is full compensation for furnishing all materials, for disposal of surplus materials; and for plugging the holes in sewer access structure that are to no longer be used.

69. Cut-In Connection, Item SPV.0060.037.

A Description
Cut-In Connections consists of all means and methods, equipment, tools, labor, etc. necessary for making a cut-in connection to the existing water main where designated on the drawings in accordance to Section 703.6 of the *City Standard Specifications*. Any associated concrete capping pipe or mechanical joint capping or plugging required due the cut-in connection is incidental to this work, and will provide a water-tight seal.

B Materials
Conform all materials used for this work to the requirements of section 702 of the *City Standard Specifications*. For any location where the existing main is cut and capped, either permanently or temporarily, the location of the cap shall be such that no more than one foot of dead end main is created unless shown or called out as such on the plans or approved by the engineer or Water Utility inspector.

C Construction
Conform all work associated with Cut-In Connections to section 703 of the *City Standard Specifications.*

D Measurement
The department will measure Cut-In Connections per each conducted as a completed unit, in accordance to section 704.5 of the *City Standard Specifications*.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0037	Cut-In Connection	Each

Payment is full compensation per each Cut-In Connection including the excavation required to expose the utility line, imported select fill, backfilling and compacting the excavation; and for restoring and maintaining the site.

70. Furnish and Install Hydrant, Item SPV.0060.038.

A Description
This work shall consist of furnishing and installing new fire hydrants as shown on the plans in accordance to section 704.7 of the *City Standard Specifications.*

B Materials
Furnish materials in accordance to section 702.4 of the *City Standard Specifications.*

Furnish hydrants with permanently plugged drain ports or hydrants without drain ports where identified on the plans.

C Construction
Install all hydrants in accordance to Hydrant Detail and Section 703.8 of the City of Madison *City Standard Specifications*, unless otherwise shown or specified.

Install hydrants with permanently plugged drain ports or hydrants without drain ports where identified on the plans.

D Measurement
The department will measure Furnish and Install Hydrant by each individual hydrant that is acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.038	Furnish and Install Hydrant	Each

Payment is full compensation for furnishing and installing all materials.

71. Cut Off Existing Water Main, Item SPV.0060.039.

A Description
The work under this section shall consist of abandoning the existing water mains at the locations shown or as designated by the engineer in accordance to section 704.14 of the *City Standard Specifications.*

B Materials
Furnish all materials as appropriate per section 702 of the *City Standard Specifications.*

C Construction
After a safe sample on the new water main section has been obtained and all water service laterals have been reconnected, abandon the existing water main where indicated or where designated by the Madison Water Utility. All work under this section shall comply with Section 703.15 of the *City Standard Specifications*.

D Measurement
The department will measure Cut Off Existing Water Main separately per unit for each complete individual cut off made in accordance to the *City Standard Specifications*. This item will not be measured for work associated with Cut-In Connections.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.039	Cut Off Existing Water Main	Each

Payment is full compensation for furnishing all work and materials in cutting off the water main as specified herein.

72. Abandon Water Valve Box, Item SPV.0060.040.

A Description
Abandon Water Valve Box consists of abandoning all water valve boxes within the project limits that serve valves no longer in service, indicated in the plans, or directed by the engineer in accordance to section 704.15 of the *City Standard Specifications.* This item includes placing the valve in the closed position prior to abandoning the box and completely removing the valve box whenever possible. This item also includes, but is not necessarily limited to all materials, equipment, labor, select fill and incidentals necessary to complete the work.

B Materials
Conform all materials used for this work with section 702 of the *City Standard Specifications*.

C Construction
Conform all associated work to the requirements of section 703 of the *City Standard Specifications*. All work shall take place after the existing water main has been abandoned. Remove the top casting to a point 3 feet below the existing elevation, then backfill the opening with select fill and compact.

D Measurement
The department will measure Abandon Water Valve Box per each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.040	Abandon Water Valve Box	Each

Payment is full compensation for furnishing all work and materials in abandoning the water valve box as specified herein.

73. Abandon Water Valve Access Structure, Item SPV.0060.041.

A Description
Abandon Water Valve Access Structure consists of abandoning all water valve access structures within the project limits that serve valves no longer in service, indicated in the plans, or directed by the engineer in accordance to section 704.15 of the *City Standard Specifications.* This item includes placing the valve in the closed position prior to abandoning the box and completely removing the valve box whenever possible. This item also includes, but is not necessarily limited to all materials, equipment, labor, select fill and incidentals necessary to complete the work.

B Materials
Conform all materials used for this work with section 702 of the *City Standard Specifications*.

C Construction
Conform all associated work to the requirements of section 703 of the *City Standard Specifications*. All work shall take place after the existing water main has been abandoned. Remove the top casting to a point 3 feet below the existing elevation, then backfill the opening with select fill and compact.

D Measurement
The department will measure Abandon Water Valve Access Structure per each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.041	Abandon Water Valve Access Structure	Each

Payment is full compensation for furnishing all work in abandoning the Water Valve Access Structure as specified herein.

74. Abandon Hydrant, Item SPV.0060.042.

A Description
Abandon Hydrant consists of abandoning and salvaging all fire hydrants identified on the drawings per section 704.16 of the *City Standard Specifications*. This item includes but is not necessarily limited to; all materials, equipment, labor, select fill and incidentals necessary to complete the work.

B Materials
All materials conform to section 702 of the *City Standard Specifications*.

C Construction
All work conforms to section 704.16 of the *City Standard Specifications*, and shall only take place after the existing water main section has been abandoned. If the hydrant is a screw type hydrant, unscrew the hydrant with chain tongs (or like) and remove high stock and salvage for the Madison Water Utility. The frost case shall be removed and salvaged for the Madison Water Utility. If the hydrant is not a screw type hydrant, excavate to the bottom of the hydrant and disassemble from the hydrant lead. Remove the hydrant and salvage for the Madison Water Utility. Backfill the opening with existing material and compact. Use select fill as additional backfill material if there is not enough existing material.

D Measurement
The department will measure Abandon Hydrant per each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.042	Abandon Hydrant	Each

Payment is full compensation for furnishing all work and materials in abandoning and salvaging the hydrant as specified herein.

75. Adjust Water Valve Box, Item SPV.0060.043.

A Description

Adjust Water Valve Box consists of adjusting all existing water valve boxes within the project limits to between¼ inch to ½ inch below finished grade. Adjustment of new valve boxes is incidental to water main construction, and will not be paid under this item. This item includes all materials, equipment, labor, and incidentals necessary to complete this work, and shall be conducted in accordance to section 704.18 of the *City Standard Specifications.*

B Materials

All materials conform to the requirements of section 702 of the *City Standard Specifications*.

C Construction

All work associated with adjust water valve box conforms to the requirements of section 703 of the *City Standard Specifications*. Excavate and expose the existing water valve boxes to the depth needed to adjust the valve boxes to finished grade. Extensions may be required. Backfill and compaction shall be in accordance to the *City Standard Specifications*. Leave all valve boxes centered over the valve operating nut and free of dirt and debris.

D Measurement

The department will measure Adjust Water Valve Box by each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.043	Adjust Water Valve Box	Each

Payment is full compensation for furnishing all work and materials for adjusting the water valve box as specified herein.

76. Furnish and Install 4-Inch Valve, Item SPV.0060.044; 6-Inch, Item SPV.0060.045; 8-Inch, Item SPV.0060.046; 10-Inch, Item SPV.0060.047; 12-Inch, Item SPV.0060.048; 16-Inch, Item SPV.0060.049; 20-Inch, Item SPV.0060.050.

A Description

This work shall consist of furnishing and installing all valves as identified on the plan and as required to complete the installation of the proposed water main in accordance to section 704.27 of the *City Standard Specifications* and as hereinafter provided.

Proposed valves associated with pressure taps, as indicated on the plans, are not to be included in these items.

B Materials

Furnish materials in accordance to section 702 of the *City Standard Specifications*. These items include furnishing all materials and fittings; bedding the valves; excavating, dewatering and compacting the trenches; installing valves, valve boxes and any necessary extensions; adjustments of valve boxes; installing and removing sheeting and bracing; all tools, labor, equipment, restraint, polyethylene encasement, thrust restraint and any other appurtenances required to furnish and install valves as required.

C Construction

Install valves in accordance to section 703 of the *City Standard Specifications.* Furnish and install valve box extensions where needed. All valve box extensions are incidental to the installation of the valve.

D Measurement

The department will measure Furnish and Install (Size) Valve per each completed unit, accordance with section 704.27 of the *City Standard Specifications*.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.044	Furnish and Install 4 Inch Valve	Each
SPV.0060.045	Furnish and Install 6 Inch Valve	Each
SPV.0060.046	Furnish and Install 8 Inch Valve	Each
SPV.0060.047	Furnish and Install 10 Inch Valve	Each
SPV.0060.048	Furnish and Install 12 Inch Valve	Each
SPV.0060.049	Furnish and Install 16 Inch Valve	Each
SPV.0060.050	Furnish and Install 20 Inch Valve	Each

Payment is full compensation for furnishing all work and materials as specified herein.

77. Disconnect and Reconnect Service Lateral 1-Inch, Item SPV.0060.051; Disconnect and Reconnect Service Lateral 1.5 or 2-Inch, Item SPV.0060.052.

A Description

This work consists of cutting off and reconnecting the existing copper water service laterals to the new water main that results in a shorter water service lateral. Furnish all materials for tapping the new main and reconnecting the copper water service laterals. The task includes but is not necessarily limited to: all excavation, including hand digging necessary to expose the existing piping, reconnecting the existing service, backfilling the excavation, compacting the backfill material, maintaining the ditches and all other work incidental to restoring and maintaining the site.

B Materials
All materials shall conform to the requirements of section 702 of the *City Standard Specifications*.

C Construction
Complete all associated work shall to conform to the requirements of section 703 of the *City Standard Specifications*.

D Measurement
The department will measure Disconnect and Reconnect Service Lateral (Size) separately per each unit for each complete cutoff and reconnection made in accordance to the *City Standard Specifications*.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.051	Disconnect and Reconnect Service Lateral – 1-Inch	Each
SPV.0060.052	Disconnect and Reconnect Service Lateral – 1.5 or 2 Inch	Each

Payment per each shall be full compensation for furnishing all associated work as specified herein.

78. Adjust Water Service Box, Item SPV.0060.053.

A Description
This work consists of adjusting existing water service boxes within the project limits to match finished grade as shown on the plans or directed by the engineer. This item includes all related incidentals necessary to complete the work.

B (Vacant)

C Construction
Excavate and expose the existing water service boxes to the depth needed to adjust the valve boxes to finished grade. Leave all service boxes centered over the curb stop and free of dirt and debris. Extensions may be required and are incidental to the bid item.

D Measurement
The department will measure Adjust Water Service Box by each individual unit, acceptably completed.

E. Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.053	Adjust Water Service Box	Each

Payment is full compensation for furnishing all related work and materials required or otherwise incidental. Adjustment of new service boxes is incidental to their installation, and will not be paid under this item.

79. Furnish and Install Curb Box, Item SPV.0060.054.

A Description
This work shall consist of providing all labor and materials necessary to install new curb boxes where existing curb boxes are damaged, or otherwise in need of replacement as authorized in writing by the engineer.

B Materials
Provide all materials conforming to the requirements of section 702.5 of the *City Standard Specifications*.

C Construction
Install the curb box vertically over the curb stop so that after the service is backfilled to final grade such that a key may be placed on the rod of the curb stop and it may be operated easily. Set curb boxes flush with the finished ground elevation.

D Measurement
The department will measure Furnish and Install Curb Box by each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.054	Furnish and Install Curb Box	Each

Payment includes full compensation for furnishing all related work and materials required or otherwise.

80. Furnish and Install Curb Stop, Item SPV.0060.055.

A Description
This work shall consist of providing all labor and material necessary to install new curb stops where existing curb stops are damaged, or otherwise in need of replacement as authorized in writing by the engineer.

B Materials
Provide all materials conforming to the requirements of section 702.5 of the *City Standard Specifications*.

C Construction
Install curb stops on the designated service at a point 8 feet from the property line, unless specified otherwise or ordered by the engineer. Install a 4-inch x 8-inch x 8-inch solid concrete masonry unit, laid flat, in the excavation to provide a firm base for the curb stop. Adequately wrap the curb stop with polyethylene wrap to prevent debris from entering or impacting the operability of the curb stop.

Do not locate curb stops in curb, sidewalk, driveways, or within 5 feet of the base of trees.

D Measurement
The department will measure Furnish and Install Curb Stop by each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.055	Furnish and Install Curb Stop	Each

Payment is full compensation for furnishing all related work and materials required or otherwise incidental.

81. Abandon Existing Curb Box, Item SPV.0060.056.

A Description
This work consists of abandoning all water service curb boxes within the project limits that are connected to laterals no longer in service as shown on the plans or directed by the engineer.

B (Vacant)

C Construction
All work shall take place after the existing water service lateral has been abandoned. Remove the top casting to a point three 3-feet below the final elevation. Restore the terrace as necessary.

D Measurement
The department will measure Abandon Existing Curb Box as each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.056	Abandon Existing Curb Box	Each

Payment is full compensation for furnishing all associated work as specified herein.

82. Furnish Excavation and Ditch for Live Tap, Item SPV.0060.057.

A Description
This work consists of excavating and preparing the ditch for the Madison Water Utility to perform a live-tap connection on an existing water main (may also be noted on the plans as "Pressure Tap"). This task includes but is not necessarily limited to; all excavation including shoring/trench protection, and water removal as necessary to expose the existing water main; clearing and preparing a suitable work area in the ditch for Madison Water Utility to perform the connection; backfill; backfilling the excavation; compacting the backfill material; restoring and maintaining the site and all other work incidental to preparing the ditch.

B Materials
All materials conform to the requirements of section 702 of the *City Standard Specifications*.

C Construction
All associated work conform to the requirements of section 703 of the *City Standard Specifications*.

D Measurement
The department will measure Furnish Excavation and Ditch for Live Tap as a complete unit per each complete live-tap connection made, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.057	Furnish Excavation and Ditch for Live Tap	Each

Payment is full compensation for furnishing all associated work and materials as specified herein.

83. Case Water Service Lateral, Item SPV.0060.058.

A Description
This work consists of encasing specified water service laterals that extend beneath larger storm sewer pipes and/or the joint MG&E/ATC trench installation and plugging the ends of the casing prior to backfilling.

B Materials
Provide 4-inch Class 52 ductile iron pipe casing in accordance to section 702 of the *City Standard Specifications*. Provide waterproof spray foam to plug the casing ends. Provide 3-inch wide, 3-mil, yellow polyethylene "Caution" tape.

C Construction
Install casing and water service laterals per Water Service Lateral Casing Detail and section 703 of the *City Standard Specifications*. Lay the casing along the intended path of the water service lateral at an elevation such that the top of the casing is a minimum of 1.5 feet below the bottom-most portion of the sewer pipe and/or MG&E/ATC trench. Ensure the casing extends beyond the outermost edge of the MG&E/ATC trench and/or sewer pipe by a minimum of 2 feet on either end. Place the lateral inside the casing. Laterals may need to be bent significantly to cross utilities. Bend laterals as little as possible. Kinked laterals will be rejected. On larger diameter copper services (i.e. 1.5-in and 2-in) where bending is not possible, use as few fittings as possible to make the required connections. Do not allow any fittings on copper inside casing.

Before backfilling plug the ends of the casing with waterproof spray foam. Install yellow "Caution" tape approximately 12 inches above and parallel to the casing along its entire length.

D Measurement
The department will measure Case Water Service Lateral as each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.058	Case Water Service Lateral	Each

Payment is full compensation for furnishing and installing all materials; excavating and backfilling where necessary.

84. Remove Street Light, Item SPV.0060.059.

A Description
This special provision describes removing and salvaging a base mounted light pole, direct bury light pole, transformer bases, arm and luminaire.

B (Vacant)

C Construction
Contact Brian Smith at (608) 261-9625 at least 7-days prior to removing any street lights on the City of Madison lighting systems. Arrange a meeting to document the existing condition of all street lighting materials that will be affected by construction activities. The City of Madison will provide the following information:

1. Identify all items to be salvaged or disposed
2. Identify existing feed-point locations and circuit breaks.

When removing existing street lights, carefully remove and stockpile all equipment at a location approved by the engineer. Place all equipment on blocks so as not to be in direct contact with the ground. Protect luminaires from moisture. Either reinstall lights as the plans show or make available for City of Madison to pick up and salvage. Properly dispose of any equipment that the city does not salvage.

Replace any equipment damaged in the removal process with equipment that is of greater or equal quality than the damaged piece.

See the "Temporary Lighting" article for additional information on maintaining lighting operation in areas as noted.

D Measurement

The department will measure Remove Street Light as each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.059	Remove Street Light	Each

Payment is full compensation for removals and disposal as required above**.**

85. Lighting Control Cabinet, Item SPV.0060.060.

A Description

This special provision describes furnishing and installing a lighting control cabinet with all electrical components and wiring assembled.

B Materials

B.1. Contactors

Furnish an open type, multi-pole, 30 Amp, 600V electrically held contactor with 120V control coil as required for each proposed circuit.

B.2. Photocell

Furnish a button type photocell and install as shown on the detail. Apply silicone caulk to maintain the watertight integrity of the enclosure. The photocell shall be rated for 120V, 1500W with 30-60 second delay between "on-off" operations.

B.3. Panel

Furnish a 120/240-volt, 100A main lugs only, single-phase, 20-circuit panel board in a 14-inch (approximate) wide NEMA 1 enclosure. Provide copper ground and split neutral bus bars in addition to copper bus bars. Provide bolt-on, thermal-magnetic circuit breakers that clearly indicate ON, OFF, or TRIPPED position in the panel.

B.4. Selector Switches
Furnish "Hand-Off-Auto" switches to control each circuit separately. Provide a "Hand-Off-Auto" legend plate for each switch. Mount the switches adjacent to the respective contactor.

B.5. Cabinet Enclosure
Provide a NEMA 3R enclosure made from .125-inch Type 5052-H32 aluminum. The doorframe shall be double flanged and all exterior seams shall be ground smooth. Door handle shall be 3/4-inch diameter stainless steel with three point latching system and hasp. Main door shall be sealed with a closed-cell neoprene gasket. Main door hinge shall be continuous 0.075-inch thick stainless steel with a 0.25-inch stainless steel hinge pin. Provide an aluminum-mounting panel at back (interior) of enclosure. Provide a weatherproof pad lock with 2-3/8-inch wide body, repinnable/ replaceable cylinder, and five keys. There shall be no louvers or Corbin main door lock. Applicable code working clearances shall be maintained between equipment mounted within the enclosure.

B.6. Surge Arrester
Furnish a surge suppressor to protect the panel board. The surge suppressor shall provide 6 modes of surge protection, meet UL1449 Second Edition with 32Ka per phase and 48KA system peak surge current, contain LED line indicators, and approximate dimensions of 4.54-inch X 2.58-inch X 0.22-inch. Connect the surge suppressor to the branch circuit breaker as indicated on the plans.

B.7. Field Wiring Termination Blocks
All connections from the field wiring to equipment in the lighting control cabinet shall be made through termination blocks. Provide quantity of channel mount, NEMA type single terminal blocks as indicated on plans that are capable of holding #12 to #1/0 wire with solderless box lugs, for power, neutral and grounding connections. Mount the terminal blocks on a mounting channel of appropriate length with end anchors and an end barrier. Each terminal block shall have a label indicating the appropriate circuit number, neutral ('N') or ground ('G') wire connected to block; handwritten numbers and letters are not acceptable means of identification. Make connections from the underground field wiring to the equipment in the lighting control cabinet through distribution blocks.

B.8. Convenience GFI Receptacle and Cabinet Light Fixture
Furnish a 20 ampere, 120 volt commercial grade GFI duplex receptacle within a galvanized steel outlet box with cover. 150 watt, 250 volt commercial grade lamp holder with galvanized steel box and 60 watt incandescent bulb. Furnish switch to turn on cabinet light by opening the cabinet door.

B.9. Incidental Materials
Secure all wiring using screw attachment type straps; adhesive type shall not be allowed.

C Construction

Assemble the control cabinet as shown on the plans. Pretest the cabinet prior to shipment to the site. Mount all equipment to panel in enclosure. Train the cables in straight horizontal and vertical directions and be parallel next to and adjacent to other cables whenever possible. Mount the cabinet to the concrete base per the manufacturer's requirements. The work under this bid item includes connection and termination to the feeder system wiring.

D Measurement

The department will measure Lighting Control Cabinet as each individual unit, completed in accordance to the contract and accepted.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.060	Lighting Control Cabinet	Each

Payment is full compensation for furnishing and installing photo control, contactors, panel, distribution blocks, surge arrestor, enclosure, grounding, wiring and electrical components; mounting to the concrete base.

86. LED Luminaire and Mounting Bracket Type 1, Item SPV.0060.061; LED Luminaire and Mounting Bracket Type 2, Item SPV.0060.062.

A Description

This special provision describes furnishing and installing Cooper fixture luminaires

B Materials

B.1 Material Qualifications

Provide an integral ballast type, high pressure sodium vapor lighting unit. All parts not specifically mentioned, which are necessary and are regularly furnished in order to provide a complete unit, shall be furnished by the successful bidder at the bid price and shall conform in quality of material and workmanship to that usually provided by the engineering practice indicated in this specification.

Furnish luminaires of the "cutoff" type conforming to all general aspects for luminaires as specified under standard spec 659 except as modified herein.

All equipment to be furnished shall be new, unused, and the latest model being produced. The LED Luminaire and Mounting Bracket Type 1 shall be a Cooper Lighting grey LED Talon luminaire (part number "TLM-B04-LED-E1-SL3-AP-DIM-4-3"). The LED Luminaire and Mounting Bracket Type 2 shall be a Cooper Lighting grey LED Talon luminaire (part number "TLM-B06-LED-E1-SL3-AP-DIM-4-3").

Mark information to identify the model, voltage, wattage, P.E.C. receptacle, and I.E.S. distribution of the luminaires on the outside of the shipping boxes. Catalog numbers are acceptable if all of the above information is coded therein.

B.2 Manufacturer'sWarranty
The manufacturer shall warrant that goods provided for this project will conform to applicable specifications, drawings, designs, samples, descriptions and will be free from defects in material and workmanship and will be fit for the particular purpose intended by the city.

This warranty shall remain in effect for one year. The warranty period commences on the date the luminaires are installed.

Under this warranty, the manufacturer agrees to replace within a reasonable time, any part, feature or product found to be defective during the warranty period at no cost to the City of Monona and/or City of Madison.

New lighting units will not be accepted before luminaires and lamps have operated without failure for a period of at least ten consecutive nights.

C Construction
Install LED Luminaires and Mounting Bracket (Type) in accordance to the pertinent provisions of standard spec 659 and in accordance to the manufacturer recommendations.

D Measurement
The department will measure LED Luminaire and Mounting Bracket (Type) as each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.061	LED Luminaire and Mounting Bracket Type 1	Each
SPV.0060.062	LED Luminaire and Mounting Bracket Type 2	Each

Payment is full compensation for furnishing and installing all materials, including luminaires and mounting hardware.

87. Pole 30-foot, 11 Gauge, Item SPV.0060.063; Pole 30-foot, 7 Gauge, Item SPV.0060.064; Pole 20-foot, 7 Gauge, Item SPV.0060.065.

A Description
This special provision describes furnishing and installing poles and arms in accordance to standard spec 657, the details shown on the plans, and these special provisions.

B Materials

All poles shall be round, with a base plate welded to the bottom end of the pole. All poles are to be a single section, with an eight-inch diameter shaft at the base and 0.14 inches per foot taper

Base plates shall have a slotted opening for anchor bolts.

All 30-foot poles shall be designated to withstand a 90 mile per hour sustained wind velocity and 117 mile per hour gust velocity with the bracket arm and luminaire in place.

All 20-foot 7 gauge poles will be used for supporting aluminum trombone arms holding signs and/or signal heads

A 4" x 6 1/2" galvanized handhole shall be provided with contoured or flat cover plate joined to the reinforced handhole frame with two bolts. The handhole shall be located 90° clockwise from the bracket arm side of poles as viewed when looking down from the top of the pole. The center of the handhole should be 14 inches from the bottom of the pole. A solid metal bracket, with a drilled and tapped hole, shall be provided for securing cover plate bolts. Clips for holding these bolts are not acceptable. The machine bolts shall be a slotted hex-head style.

The pole shaft shall be fabricated from the herein specified manufacturer's best grade, hot rolled basic open hearth, or basic oxygen process steel. The shaft shall have only one longitudinal, electrically welded joint, with the strength rated at not less than 100 percent of the yield strength of the steel and shall have no intermediate horizontal joints or welds. Only one length of steel sheet shall be used, and it shall be formed into a continuously tapered shaft, having a taper of approximately 0.14 inchers per foot. The weld shall be smooth, allowing the specified taper to be constant. The pole shall be within 1/4" in 10 feet of being straight and centered on its longitudinal axis.

A grounding nut or nut holder for accommodating a 1/2 inch x 13 UNC threaded bolt or stud shall be provided on the inside of the shaft immediately opposite the center of the handhole. The nut shall be completely free of any metal residue that would prevent a bolt from easily screwing entirely into the nut.

All poles holding LED fixtures shall have mounting and wire raceway holes placed before being hot-dipped galvanized. Coordinate mounting needs with the LED luminaires selected for the project prior to ordering poles.

A pole-top cover and four nut covers shall be furnished and installed for each pole.

Each steel pole shall have a permanent imprinted metal label attached with rivets midway between the base plate and the handhole. The label shall state the overall pole height, shaft gauge, and year of manufacture. The label shall conform to the curvature of the pole and not have any sharp edges or corners. All rivets shall be smooth inside and outside of the pole.

After all welding has been completed, the exterior surface of the pole, arm, and hardware shall be thoroughly cleaned and shall be free of all loose rust, mill scale, dirt, oil, grease, and other foreign substances. The poles and arms shall be hot-dipped galvanized in accordance to the requirements of ASTM Designation A123. The hardware shall be hot-dipped galvanized in accordance to ASTM designation A153The galvanized finish shall be bright, shiny, and uniform. Matted or dull pole sections will not be accepted.

Furnish non-shrink commercial grout from approved products list.

C Construction

Metal poles shall be set and plumbed with the use of leveling nuts furnished with the anchor bolts. Luminaries shall be leveled after erecting and leveling the metal standards with bracket arms. The proper leveling method may be obtained from the manufacturer's instruction manual. Nuts on anchor and transformer bolts shall be torqued to 175-200 foot pounds or as directed by the engineer. Rust, corrosion, and anti-seize protection shall be provided at all threaded assemblies by coating and mating surfaces with Markal (Hightemp – E-Z Break), Never-Seez (Marine Grade), LPS 100, Lubriplate, or approved equal.

The stranded copper ground wire that is installed as a part of base construction shall be attached with an approved connector (Fargo GC 202 or approved equal) to a ground nut locate inside the pole opposite the handhole.

When transformer bases are not installed, grout shall be troweled between the pole and concrete base and finished at an angle from the edge of the pole base to the outer edge of the foundation. A ½ inch slot for drainage shall be left through the grouting on the street side at the top of the concrete base.

D Measurement

The department will measure Pole (description) as each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.063	Pole 30-Foot 11 Gauge	Each
SPV.0060.064	Pole 30-Foot 7 Gauge	Each
SPV.0060.065	Pole 20-Foot 7-Gauge	Each

Payment is full compensation for furnishing and installing all materials, including poles, all hardware and fittings necessary to completely install the pole; for corrosion prevention when required; for installing identification plaques.

88. Electrical Pullbox Type 1, Item SPV 0060.066; Electrical Pullbox Type 3, Item SPV 0060.067; Electrical Pullbox Type 5, Item SPV 0060.068.

A Description

This special provision describes furnishing and installing pull boxes and manholes in accordance to standard spec 653, the plan details, and as herein provided.

B Materials

Electrical Pullbox, Type I shall be gray colored polymer concrete construction. Box dimensions for Type I shall be 19" wide x 32" long x 24" deep and come with a cover rated to withstand 15,000 lbs over a 10" square with a minimum test load of 22,568 lbs.

Electrical Pullbox, Type III shall be high density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Box dimensions for Type III shall be 12" wide x 12" long x 12" deep. The Type III box and polymer cover shall be rated to withstand 20,000 lbs.

Electrical Pullbox, Type V, shall be gray colored polymer concrete construction. Box dimensions shall be 24" wide by 36" long by 24" deep. The box and cover shall be rated at 15,000 lbs over a 10" square.

Each cover shall have the logo "TRAFFIC SIGNAL" imprinted from the manufacturer.

C Construction

Install in accordance to the pertinent provisions of standard spec 653.3 of the standard specifications and the plan details.

D Measurement

The department will measure Electrical Pullbox (Type) as each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.066	Electrical Pullbox Type 1	Each
SPV.0060.067	Electrical Pullbox Type 3	Each
SPV.0060.068	Electrical Pullbox Type 5	Each

Payment is full compensation for furnishing and installing all materials, including crushed aggregate; for excavation, backfill, and disposal of surplus materials.

89. Electrical Utility Access Structure, Item SPV.0060.069.

A Description
Perform the work in accordance to the applicable provisions of standard spec 611 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Electrical Utility Access Structures each individual unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.069	Electrical Utility Access Structure	Each

Payment for the Electrical Utility Access Structure is full compensation for providing and installing all masonry, reinforcement, conduit connections, steps, and other fittings; frame and casting; for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

90. Concrete Base Type G, Item SPV.0060.070; Concrete Base Type LB-1, Item SPV.0060.071; Concrete Base Type LB-3, Item SPV.0060.072; Concrete Base Type LB-8, Item SPV.0060.073; Concrete Base Type P, Item SPV.0060.074; Concrete Base Type M, Item SPV.0060.075.

A Description
This special provision describes construction of concrete foundations, including necessary hardware, as shown on the plans, in accordance to the pertinent provisions of standard spec 654 and as hereinafter provided.

B Materials
Concrete masonry shall be Grade A, A-WR, A-FA, or A-IP conforming to the requirements of standard spec 501.

Conduit cast within the bases shall be Schedule 40 polyvinyl chloride (PVC) electrical conduit and shall conform to the requirements of standard sped 652.

Anchor bolts for Type G bases shall be made from high-strength steel 50 KSI minimum yield strength, ASTM A36, and each shall be fitted with a hard washer and heavy hex nut. Each bolt shall have approximately 3 inches or more of thread at the top end. The bolts, washers, and nuts shall be ¾" x 24".

Anchor bolts for Type LB-3 and Type LB-8 bases shall be made from high strength steel (50 KSI minimum yield strength), ASTM A36, and each shall be fitted with two hard washers and two heavy hex nuts. Each bolt shall have approximately 6 inches or more of thread at the top end. The bolts, washers, and nuts shall be galvanized. Bolts for the LB-8 base shall be 1.25 inch by 48 inch, including 4 inch L-bend at the bottom. Bolts for the LB-3 base shall be 1.00 inch by 40 inch including 4 inch L-bend at the bottom.

The Type P and M bases shall include a concrete maintenance platform. The Type P and bases shall generally be constructed in accordance to the Concrete Control Cabinet Base Standard Detail. The location of the conduits in the base shall be confirmed with the City of Madison. Anchor bolts, nuts, and washers for Concrete Controller Base, Type P, will be provided and installed by the City of Madison when installing signal control cabinets. Bar steel reinforcement shall conform to the requirements of standard spec 505.

C Construction

Place the bases with one side parallel to the centerline of the street.

Provide forms of sufficient depth to provide a minimum of 12 inches of formed base below the finished grade on the low side of the base. Construct the top surface of the base with a 3/4 inch bevel on the edges with a rubbed finish.

Cast anchor bolts into the base as shown on the plans. Verify bolt circle diameters before constructing the bases.

Furnish and install manufactured elbows in all bases, except as noted on the details. Install elbows that permit conduit to be installed in as nearly straight-line runs as possible, without unnecessary bends. Bases not installed to this standard will not be accepted. Extend existing conduit into the bases. Install an extra elbow as directed by the engineer at each base at the end of a run. Install extra elbows in any new base as directed by the engineer.

Erect poles on the concrete bases until the bases after the concrete has cured for at least seven days.

Provide a rubbed finish down to finished grade for all concrete bases.

D Measurement

The department will measure Concrete Base (Type) as each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.070	Concrete Base Type G	Each
SPV.0060.071	Concrete Base Type LB-1	Each
SPV.0060.072	Concrete Base Type LB-3	Each
SPV.0060.073	Concrete Base Type LB-8	Each
SPV.0060.074	Concrete Base Type P	Each
SPV.0060.075	Concrete Base Type M	Each

Payment is full compensation for furnishing and installing all materials including conduit, bushings, caps and/or plugs, ground rod, anchor bolts, cad welding, copper grounding wire; bar steel reinforcement, and concrete masonry; for providing openings through existing pavement where required; for excavation, including hand-digging as required, backfill, and disposal of surplus materials.

91. Concrete Base Offset, Item SPV.0060.076.

A Description

This special provision describes construction of concrete street light bases, including necessary hardware, in accordance to the pertinent provisions of standard spec 654 and as hereinafter provided.

B Materials

Concrete masonry shall be Grade A, A-WR, A-FA, or A-IP conforming to the requirements of standard spec 501. Conduit cast within the bases shall be Schedule 40 polyvinyl chloride (PVC) electrical conduit and shall conform to the requirements of standard spec 652. Anchor bolts shall be made from high strength steel (50 KSI minimum yield strength), ASTM A36, and each shall be fitted with two hard washers and two heavy hex nuts. Each bolt shall have approximately 6 inches or more of thread at the top end. The bolts, washers, and nuts shall be galvanized. Bar steel reinforcement shall conform to the requirements of standard spec 505.

C Construction

Locate proposed street light bases as shown in the plans in accordance to the Construction Staking Electrical Systems bid item. Where potential underground conflicts exist, locate the existing utility. Hand excavation may be required. MG&E gas requires an inspector to be present when excavating near MG&E gas facilities in accordance to the Utilities Article of these special provisions. The engineer will determine whether to adjust the base location laterally to avoid the conflict or require the use of an Offset Base. Install rock shield between the main and street light base as directed by MG&E personnel. MG&E will supply the rock shield.

Forms shall be of sufficient depth to provide a minimum of 12 inches of formed base below the finished grade on the low side of the base. The top surface of the base shall be level with a 3/4 inch bevel on the edges and shall be given a rubbed finish.

Anchor bolts shall be cast into the base as shown on the plans. Bolt circle diameters shall be verified before constructing the bases.

Manufactured elbows shall be furnished and installed in all bases by the contractor, except as noted on the details. Elbows shall be installed to permit conduit to be installed in as nearly straight-line runs as possible, without unnecessary bends. Bases not installed to this standard will not be accepted.

Existing conduit shall be extended into the bases. Elbows shall conform to the requirements of the type of conduit entering the base. Each base at the end of a run shall have an extra elbow installed as directed by the engineer.

Extra elbows shall also be installed in any base as directed by the engineer. Poles shall not be erected on the concrete bases until the bases have cured for at least seven days.

All concrete bases shall require a rubbed finish down to finished grade.

D Measurement

The department will measure Concrete Base Offset as each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.076	Concrete Base Offset	Each

Payment is full compensation for furnishing and installing all materials including conduit, bushings, caps and/or plugs, ground rod, anchor bolts, cad welding, copper grounding wire; bar steel reinforcement, and concrete masonry; for providing openings through existing pavement where required; for excavation, including hand-digging as required, backfill, and disposal of surplus materials.

92. Transformer Base Steel, 16-Inch, Item SPV.0060.077; Transformer Base Steel, 20-Inch, Item SPV.0060.078.

A Description

This special provision describes furnishing and installing steel transformer bases as shown on the plans and as follows.

B Materials

The steel transformer bases shall be hot-dipped galvanized in accordance to ASTM designation A123. The bases shall have slotted bolt openings. Steel connecting bolts, size 1.25 inches by 4 inches, hold down lugs for 1.25 inch bolts and nuts and washers shall be furnished. Verify the bolt diameter, projection and bolt circle dimension required for each application. Ensure the concrete bases and pole bases are compatible with the

transformer bases and bolts. All such material shall be hot-dipped galvanized and be of sufficient size and strength to exceed the capacity of the bases. The 16 inch base shall conform to the detail in the plan. The 20 inch base shall be Valmont M201, Union Metal 14-B2640Y2, Millerbernd 390A105, Ameron TB1316, or approved equal.

Furnish to the engineer at the time of delivery of the bases, a manufacturer's certificate of compliance that the base and hardware as furnished meets the above requirements.

C Construction
Install transformer bases in accordance to the manufacturer's instructions, and as shown on the plans.

D Measurement
The department will measure Transformer Bases (Size) Steel, Black as each individual transformer base unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.077	Transformer Base 16-Inch Steel	Each
SPV.0060.078	Transformer Base 20-Inch Steel	Each

Payment is full compensation furnishing and installing transformer bases, streetlight pole wire, mechanical grounding connector and related hardware; for leveling shims when required.

93. Monotube Pole, Type 9, Item SPV.0060.079; Monotube Arm, 20-Foot, Item SPV.0060.080; Monotube Arm, 25-Foot, Item SPV.0060.081; Monotube Arm, 30-Foot, Item SPV.0060.082.

A Description
This section describes furnishing and installing poles and monotube arms for traffic signals.

B Materials
Design support structures, consisting of poles and arms, conforming to the completed maximum loading configurations and to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the methods of appendix C of those AASHTO standards.

Design support structures to the AASHTO fatigue category criteria III.

Along with the materials list, submit a certificate of compliance certifying that poles as furnished, conform to the above structural performance requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and notarized. Send a copy of the certificate and a copy of the pole shop drawings to the engineer. Furnish poles from an approved manufacturer.

Furnish shop drawings as specified in standard spec 506.3.2, except submit 5 copies with the materials list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the outside diameters of the pole at the butt, top, and splice locations the plans show. Show the width, depth, length, and thickness of all material, and list all pertinent ASTM specification designations and metal alloy designations together with the tensile strength of all metallic members.

After completing the manufacturing process, ensure that all shafts a nominal 40 feet or less in length for lighting poles only, are round, of one-piece construction, and of the specified length.

Construct poles of materials having sufficient rigidity that, with all material installed and in place as the plans show, the centerline of the shaft is vertical. Include dampers for poles as needed. If the engineer determines that vibration is a problem after a pole has been installed, install dampeners as the engineer directs.

After all welding has been completed, the exterior surface of the pole, arm, and hardware shall be thoroughly cleaned and shall be free of all loose rust, mill scale, dirt, oil, grease, and other foreign substances. The poles and arms shall be hot-dipped galvanized in accordance to the requirements of ASTM Designation A123. The hardware shall be hot-dipped galvanized in accordance to ASTM Designation A153. The galvanized finish shall be bright, shiny, and uniform. Matted or dull pole sections will not be accepted.

For monotube pole, provide anchor rods, nuts and washers for the contract base (Type 10).

Provide a reinforced hand hole measuring 5 inches by 8 inches. Locate the hand hole approximately 18 inches from the bottom of the pole base plate to the center of the door. For the hand hole, include an access cover mounted to the pole by two 1/4” -20 x 3/4” hex-head stainless steel bolts.

Provide a grounding lug complete with mounting hardware as required, inside the pole, 180-degrees from the handhole side of the pole.

Provide access to the grounding L-clip from the hand hole. Before galvanizing the pole, weld the grounding L-clip directly opposite the hand hole on the inside wall of the pole. Equip the top of the pole shaft with a removable, ventilated cap held securely in place by at least one 1/4” -20 x 3/4” hex-head stainless steel set screw.

Ensure that all castings are clean, smooth, and with all details well defined and true to pattern.

Attach base plates firmly to the pole shaft by welding or other approved method. Each steel pole shall have a permanent imprinted metal label attached with rivets midway between the base plate and the handhole. The label shall state the shaft length, manufacturer's name, and year of manufacture. The label shall conform to the curvature of the pole and not have any sharp edges or corners. All rivets shall be smooth inside and outside of the pole.

Monotube arms shall have:

- A mounting device welded to the pole end of the monotube arm that allows the attachment of the arm to a pole.
- Stiffeners or gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads.
- A wiring raceway.

C Construction

Under each bid item, furnish and install poles, ventilated pole caps, arms, and all necessary miscellaneous hardware needed to complete the installation of the poles and arms.

Install dampeners as the plans show and for poles and arms used in configurations susceptible to vibration. If the engineer determines that vibration is a problem after a pole and arm has been installed, install dampeners as the engineer directs.

After completing erection using normal pole shaft raking techniques, ensure that the centerline of the shaft is vertical.

D Measurement

The department will measure Monotube Pole, Type 9, and Monotube Arm (Length) by each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.079	Monotube Pole, Type 9	Each
SPV.0060.080	Monotube Arm, 20-Foot	Each
SPV.0060.081	Monotube Arm, 25-Foot	Each
SPV.0060.082	Monotube Arm, 30-Foot	Each

Payment is full compensation for furnishing and installing all materials**.**

Payment for Monotube Pole, Type 9 (Item SPV.0060.079) also includes anchor rods, nuts and washers for the contract base (Type 10).

94. Traffic Signal Control Cabinet, Item SPV.0060.083.

A Description

This special provision describes providing a door-in-door style, open bottom, base mounted cabinet, with exterior dimensions of 55" height, 38" width, and 26" depth. The cabinet shall be of weatherproof construction, fabricated from sheet aluminum at least 0.125-Inches thick and adequately reinforced. A heavy duty stainless steel handle (5/8 inch minimum diameter) and latch shall be provided. The door hinges shall be all stainless steel and continuous for the full height of the door. The cabinet interior shall have a zinc chromate prime coat and be finished with one coat of rust-resistant high gloss white enamel. The cabinet exterior shall be natural mill finish. Two adjustable-height shelves of 12-13 inches depth are required. Each

B Materials

B.1 Locks

Provide a main cabinet door with a tumbler lock keyed for a Corbin No. 2 key. Equip the auxiliary (Police Panel) door with a lock for a standard police key. Furnish a key for each lock. When the door is closed and latched, with the key removed, the door shall lock. The locking bar shall be a solid non-rusting metal with a square cross-section, equipped with a double roller on each end.

B.2 Door Stop

Equip the cabinet with a door stop assembly to hold the door open at approximately 90º and 150º.

B.3 Weather Protection and Incandescent Light

Equip the cabinet with an electric fan assembly with a minimum capacity of 100 cubic feet per minute. Mount the fan in the top of the cabinet in a manner to prevent rain from entering the cabinet. The fan shall be thermostatically controlled and shall be manually adjustable to turn on between 80º F and 150º F. The cabinet fan circuit shall have fuse protection at 125% of the capacity of the fan motor.

Air intake near the bottom of the cabinet via louvered vents shall have a removable filter, including a gasketed aluminum filter replacement for use in the winter to prevent entrance of snow.

Mount an incandescent light socket in the upper front part of the cabinet.

B.4 Grounding

Provide a copper equipment grounding bus in each cabinet to accept up to #4 stranded wire. Ground the ground bus to the cabinet, and provide at least 14 terminals of the tubular clamp type. Connect all ground bus together with a minimum #8 green copper wire.

B.5 Solid State Flasher
Furnish the cabinet with two 6 pin, 20 amp, double circuit solid state flashers, fully connected and operating.

B.6 Flash Transfer Relays
Provide electromechanical relays for opening and closing traffic signal field circuits. Furnish the cabinet supplied under this specification with four 2-pole transfer relays wired to transfer the vehicle phases. Cover relays used for this purpose, insulate, or locate so that electrically alive parts are not readily exposed. All relays shall be next to each other and mounted on the back panel.

All contact points which make, break, and carry current to the signal lamps shall be of silver-cadmium, coin silver or equivalent material. Contact shall be capable of making, breaking, and carrying a current of 10 amperes, 120 volts, without undue pitting. Relay coils shall have a power consumption of 10 volt amperes or less and shall be designed for continuous duty. Contact points which make, break, and carry current to the solid state switch packs shall be capable of carrying 40 amperes of 120 volts without undue pitting.

The transfer relay shall withstand a potential of 1500 volts at 60 Hertz between insulated parts, and between current carrying parts and grounded and non-current carrying parts. Each transfer relay shall have a one cycle surge rating of 175 amperes RMS (247.5 amperes peak). Each transfer relay shall be unaffected by electrical noise, having a rise time of up to 200 volts per microsecond. Each relay shall be unaffected by the 500 volt power noise transient test.

The flash transfer relay shall energize the flasher and transfer field signal light circuit from the controller to flasher, and shall permit flashing lights as programmed on the main street or highway and on the cross street or streets. Operation of the flash transfer relay circuit shall not prohibit the operation of the controller, but shall prohibit operation of the field signal light circuits by the controller.

The flash transfer relay shall be provided with a connector for the following pin assignments:

Pin Function
1. Relay Coil
2. Relay coil
3. NC Ckt. #1
4. NC Ckt. #2
5. Relay Common Ckt. #1
6. Relay Common Ckt. #2
7. No. Ckt. #1
8. No. Ckt. #2

Wire the flash circuit in a fail-safe manner so that the intersection will revert to and remain in the flashing mode whenever and for as long as either the controller or the monitor is disconnected. Support the relays with a rack at least 8 1/2 inches out from each socket.

B.7 Flash Sequence Programming

A programming means shall be provided to determine if flashing yellow or red appears on the output field terminals to the signal heads. Accomplish programming with simple tools such as a screwdriver. Conform the sequence timing for flash by automatic call-up with the MUTCD.

B.8 Load Switches

Furnish eight 3-circuit load switches, discrete type, with each cabinet. The load switch panel shall have a bracket support for its full length and extending out 8 1/2 inches from the panel socket. The bracket support is intended to reduce switch loosening from vibrations and to prevent switches from falling down if disengaged from the socket.

B.9 Harness Wiring

The wiring and cabinet panel arrangement shall provide for full dual ring eight phase actuated operation. A 12-channel conflict monitor harness shall be supplied and wired in each cabinet. All cabinet wiring harnesses shall be neat, firm and routed to minimize crosstalk and electrical interference. Loop harnesses shall be routed to the right (hinge) side of the cabinet and attached up to shelf level to avoid harnesses dangling in front of the door.

Wiring containing AC shall be routed and bundled separately from all low voltage control circuits. Fuses and surge protection shall be furnished for all interconnect circuits. All conductors and live terminals or parts, which could be hazardous to maintenance personnel, shall be covered with suitable insulating material.

B.10 Terminal Blocks

Terminal block connections shall be a minimum of 8 inches from the bottom of the cabinet. The terminal blocks provided shall be two-position barrier type. Terminal blocks shall be so arranged that they shall not upset the entrance, training and connection of incoming field conductors. All terminals shall be clearly identified and shall be permanently associated with the terminal block.

Terminal blocks used for field wiring connections (field terminals) shall be capable of securing conductors with 10-32 or larger nickel or cadmium plated brass binder head screws.

Terminal blocks used for the applied AC power shall be capable of securing conductors with a 10-32 nickel or cadmium plated brass binder head screws.

There shall be field terminal blocks provided for the connection of all loop detectors. Where a card rack is required, terminal blocks to accommodate 16 detector channels shall be provided.

B.11 Detectors Card Rack

The detector card rack shall provide four slots for four-channel detectors (a total of 16 detector channels) and a power supply slot. The card rack shall have flanges turned out. The card rack shall be fully wired and connected to cabinet terminals 1 through 16. Terminals 1 through 8 shall be associated with vehicle phases 1 through 8, respectively. A four-channel power supply shall be supplied with per-channel fusing and output indicators for each channel. The card rack shall be mounted on the top shelf, left side as one looks into the cabinet.

B.12 Detectors

The cabinet shall contain four 4 channel digital loop detector amplifiers approved for use by City of Madison Traffic Engineering and shall have at the minimum the following characteristics: Rack mount design, 2" maximum width for front panel. User selection for the following must be available on the front panel without requiring auxiliary devices:

1. Pulse or presence.
2. Sensitivity, minimum of 6 levels.
3. Sequentially scan channels or other suitable means to reduce crosstalk.
4. Display detection and faults for each channel.
5. Self tuning.

B.13 Power Panel

The cabinet shall have a power distribution panel containing the following elements:

1. Surge protection provided by use of a varistor or other suitable equipment.
2. Two 30 amp Radio Interference Suppressors.
3. 50 amp single pole Main Breaker followed by dual 30 amp Main Circuit Breakers with single common trip.
4. 15 amp Auxiliary Equipment Circuit Breaker.
5. Two 30 amp Power Relays (Mercury Contactors).
6. Neutral Bus Bar Isolated from Cabinet Ground.
7. Ground Bus Bar.
8. EDCO SHP 300-10 Power Line Surge Protector.

The mercury contactor shall be normally open and capable of switching 30 amperes at 120 volts AC.

A neutral bus terminal shall be provided with at least 14 terminals of the tubular clamp type able to accept up to #4 stranded wire.

B.14 Police Panel

The main door of the cabinet shall have a police panel door. Behind this door shall be a panel with a minimum of a toggle switch labeled "SIGNALS ON-OFF" and a toggle

switch labeled “SIGNALS FLASH-AUTO.” The signals on-off switch shall cause all intersection displays to be turned off and the controller AC power to be removed when placed in the off position.

In the flash position, the signals flash switch shall cause the intersection to be placed in flashing position and the controller shall stop time.

B.15 Maintenance Panel

Provide a maintenance panel on the inside of the main door containing the following:

1. GFCI duplex convenience outlet.
2. Stop time switch.
3. Controller on/off switch.
4. Vehicle and pedestrian detector actuation test push buttons.
5. Incandescent light switch.

The stop time switch shall be a three-position toggle switch labeled ON, OFF, and AUTO. In the ON position, stop timing power shall be applied to the controller. In the OFF position, stop timing shall be removed from the controller if it has been applied by the conflict monitor or other auxiliary device. The AUTO position shall be the normal operating position and allow auxiliary devices to apply stop timing inputs to the controller. The conflict monitor shall be wired through the stop time switch such that when in the AUTO setting and a conflict is detected, stop timing shall be applied to the controller.

The controller switch shall be a two-position toggle switch labeled ON and OFF. In the OFF position, the intersection shall be placed in flashing operation and the controller turned off.

There shall be a detector test push button or toggle switch for each vehicle and pedestrian phase. These shall be located to preclude accidental activation when the door is closed.

B.16 Pedestrian Button Wiring

Pedestrian push button logic shall be opto-isolated such that there will be no logic common carried out to each individual push button. The AC- from the field pedestrian push button shall activate the opto-isolated pedestrian push button relays when the field button is activated.

B.17 Testing, Labeling and Wiring Diagram

The vendor shall thoroughly test the cabinet wiring and auxiliary devices with a controller and monitor (if the harness is to be furnished by the vendor) in place.

All equipment furnished in the cabinet shall be clearly and permanently labeled.

A good reproducible 24 inch by 26 inch Mylar wiring diagram shall be supplied to the city.

B.18 Manufacturer's Warranty
The vendor shall warrant the performance and construction of the fully-wired cabinet to meet the requirements of this specification, and shall warrant all wiring parts, components, and appurtenances against defects in design, material and workmanship for a period of one year from the date of installation. In the event defects and failures become apparent during this time, the vendor shall repair and/or replace all defective parts or appurtenances at no additional expense to the city. This specification is to construe that any part, or parts, that fail to function properly shall be replaced at no charge to the city.

B.19 Cabinet Design for City Review Before Manufacturing.
The vendor shall supply the city with a complete set of plans for the cabinet for review before manufacturing the cabinet. After city approval of the design as received or as modified by joint agreement between the city and the vendor, the cabinets shall be wired according to the approved design and specifications. The city will complete its review within five work days from receipt of the cabinet design.

C (Vacant)

D Measurement
The department will measure Traffic Signal Control Cabinet by each unit, acceptably completed and delivered to the City of Madison.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.083	Traffic Signal Control Cabinet	Each

Payment is full compensation for furnishing and delivering all materials to the City of Madison, 1120 Sayle Street.

95. Traffic Signal Controller, Item SPV.0060.084.

A Description
This special provision describes furnishing a traffic signal controller with auxiliary equipment to the City of Madison.

B Materials
Furnish the following:

1. Econolite ASC/3-2100 with HTR, data key, and Ethernet
2. FSK TLM 25 pin for this controller
3. Econolite TIO board with harness
4. D connector interface harness and board

C (Vacant)

D Measurement
The department will measure Traffic Signal Controller by each individual unit, acceptably completed and delivered to the City of Madison.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.084	Traffic Signal Controller	Each

Payment is full compensation for furnishing and delivering the signal controller, and all auxiliary equipment, to the City of Madison, 1120 Sayle Street**.**

96. NEMA-Plus Conflict Monitor, Item SPV.0060.085.

A Description
This special provision describes furnishing a NEMA-Plus 12-Channel Conflict Monitor to the City of Madison.

B Materials
Furnish a NEMA-Plus 12-Channel Signal Conflict Monitor, with LCD display, and a Ejector Tab card release on side of card.

C (Vacant)

D Measurement
The department will measure NEMA-Plus Conflict Monitor by each unit, acceptably completed and delivered to the City of Madison

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.085	NEMA-Plus Conflict Monitor	Each

Payment is full compensation for furnishing and delivering the conflict monitor to the City of Madison, 1120 Sayle Street.

97. Traffic Signal Ethernet Switch, Item SPV.0060.086.

A Description
This special provision describes furnishing and installing an Ethernet switch in an existing traffic signal cabinet, as specified in standard spec 651, 655, 670, 674, and 675, as shown on the plans, and as provided hereinafter.

B Materials
Furnish Cisco IE-2000-4TS-B Ethernet switches as shown in the plans. Provide all necessary cables between the Ethernet switch and device or devices as shown in the plans.

C Construction
Install the traffic signal Ethernet switch in an existing traffic signal cabinet. Connect it to devices as shown on the plans, according to the manufacturer's recommendation, and as directed by the engineer.

Contact Mike Christoph at the City of Madison Traffic Engineering shop at (608) 266-9031 a minimum of 7 working days in advance to coordinate installing equipment in existing traffic signal cabinet.

D Measurement
The department will measure Traffic Signal Ethernet Switch as each individual traffic signal Ethernet switch, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.086	Traffic Signal Ethernet Switch	Each

Payment is full compensation for furnishing and installing an Ethernet switch, all necessary incidental wiring and hardware, making all necessary connections.

98. Traffic Signal Trombone Arms Aluminum, 18-Foot, Item SPV.0060.087; 12-Foot, Item SPV.0060.088.

A Description
This special provision describes furnishing and installing trombone mast arms and all necessary miscellaneous hardware needed to complete the installation of the trombone mast arm as shown on the plans, in the standard specifications, and as hereinafter provided.

B Material
The traffic signal trombone arm shall be designed to withstand loadings resulting from a 12" 3-section aluminum signal with backplates and an 18" x 90" aluminum street name sign mounted on the arm as shown on the drawing. Design factors in accordance to the AASHTO Specifications for the Design and Construction of Structural Supports for Traffic Signals, Signs, and Highway Lighting, together with a wind pressure resulting from a wind velocity of 80 miles per hour plus gust factor, shall be applied to these arms, with the above signals attached.

Certification of compliance with these stated AASHTO performance requirements shall be furnished with submission of the material list.

Shop drawings shall be submitted and shall include dimensions of width, depth, length and thickness of all members and ASTM designation and alloy designation of aluminum members.

The trombone arm shall be aluminum and shall consist of round or oval upper and lower members joined by one or more tubular vertical struts welded to them. The pole end of the mast arm shall have a mounting clamp welded to it which will permit the attachment of the mast arm to a round pole of varying diameter. The lower clamp shall be 5-7/8" I.D. and the upper clamp shall be 5-l/2" I.D. The design of the clamps shall accommodate some variation in pole diameter while still attaining full contact between the clamp and the pole. The surface area of the clamp contacting the pole shall be sufficiently large and designed to prevent horizontal rotation in windy conditions. The bolts connecting the arm bracket to the back bracket shall be galvanized steel; stainless steel bolts are not acceptable. The vertical strut, which has provision for mounting the signal head, shall also provide for horizontal adjustability along the main mast arm members so that signal heads of various lengths with backplates, up to and including 5-section 12" heads, can be accommodated within the confines of the mast arm. The cross tees for signal heads shall each have two slots on the threaded hubs that face each other.

The wiring raceway entrance shall be through the lower mounting bracket.

The mast arm shall have a uniform natural aluminum finish and shall be clean. No painting or other corrosion preventive maintenance will be required.

The portion of the main members of the arm to which the arm attachment bands are welded shall be one piece seamless tapered aluminum tubes.

The main arm member shall be attached to the pole using extruded aluminum clamps fastened with continuously threaded stainless steel bolts with nuts and washers meeting the requirements of ASTM Designation A-320. Strength and/or grade specification ratings shall be listed on the shop drawings. Stiffeners or gussets shall be provided at the joints between the main arm tubes and arm clamps to provide adequate strength to resist side loads.

Shims shall be made of an aluminum alloy.

A permanent imprint of the "Type" and "Year of Manufacture" shall be made on the underside of the lower member of each arm.

C (Vacant)

D Measurement
The department will measure Traffic Signal Trombone Arms Aluminum (Length) by each unit, acceptably complete and installed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.087	Traffic Signal Trombone Arm Aluminum 18-Foot	Each
SPV.0060.088	Traffic Signal Trombone Arm Aluminum 12-Foot	Each

Payment is full compensation furnishing and installing all materials including all hardware, fittings, mounting clamps, shims and attachments necessary to completely install the mast arm.

99. Traffic Signal Heads 8-Inch, 3-Section, Item SPV. 0060.089; Traffic Signal Heads 12-Inch, 3-Section, Item SPV. 0060.090; Traffic Signal Heads 12-Inch, 4-Section, Item SPV. 0060.091; Traffic Signal Heads 12-Inch, Pedestrian, Item SPV. 0060.092; Traffic Signal Heads 12-Inch, Pedestrian Countdown, Item SPV. 0060.093.

A Description
This special provision describes furnishing and installing vehicle and pedestrian signals with LED indications in accordance to the standard specifications and these special provisions.

B Materials
Furnish circular and arrow LED modules from the department's approved product list and conforming to ITE VTCSH-LED.

Furnish 12-Inch Pedestrian LED Full Hand/Full Man Overlay Module conforming to the following requirements:

1. Module shall fit in a standard 12" x 12" housing.. A foam weatherstripping, approximately ¼" x ¼", shall be applied to the outside edge of the front face. The housing is not included in this item.
2. Display size shall be 9" minimum.
3. Each symbol shall be fully filled when illuminated. Outlines of the hand or man are not acceptable.
4. Modules shall come with spade adapters at the end of wire of sufficient length to reach the terminal strip in the signal housing.
5. Module shall meet all requirements and recommendations of the current Manual on Uniform Traffic Control Devices (MUTCD) and the current Performance Specifications of the Institute of Transportation Engineers (ITE).

6. The module shall be warranted in full for a minimum of five years.

Furnish 12-Inch Pedestrian Countdown LED signal timer conforming to the following requirements:

1. Timer shall fit in a standard 12" x 12 housing. A standard size gasket shall be supplied. The housing is not included in this item.
2. Numeral size shall be 9" minimum.
3. The timer shall automatically calculate and display the length of the remaining pedestrian change interval (WALK display not included).
4. A control wire shall be provided so that when 120V AC current is applied, the timer will immediately go dark. This control wire will be used by the city when the signal is preempted and the length of the pedestrian change interval is shortened.
5. Modules shall come with spade adapters at the end of wire of sufficient length to reach the terminal strip in the signal housing.
6. Timer shall meet all requirements and recommendations of the current Manual on Uniform Traffic Control Devices (MUTCD).
7. The timer shall be warranted in full for a minimum of five years.

Provide all pedestrian signals with tunnel visors. Provide all vehicle signals with cutaway visors.

Provide snow-shedding shield on each signal indication on all signals mounted on monotube arms or trombone arms. The shield shall be impact resistant polycarbonate, designed and installed specifically to reduce snow accumulation, while not allowing water to enter or reside in the signal unit. If there are not any far side signals on monotube arms or trombone arms, then install snow-shedding shields on each signal indication of the far right signal.

Pedestrian countdown timers have a control wire so that when 120V AC current is applied, the timer will immediately go dark. This control wire shall be wired back to the signal control cabinet.

Provide either CH-SIG, Siemens LFE/SG, McCain, or Peek/TCT or a make and model approved by City of Madison Traffic Engineering for all vehicle and pedestrian signal heads. Provide drain channels so that rainwater does not pond on top of the units.

Make all vehicle and pedestrian signal heads with polycarbonate material, UV stabilized, with color impregnated in the material. All features and performance shall meet the requirements outlined in the latest revision of the Institute of Transportation Engineers' publication, "Adjustable Face Vehicular Traffic Control Signal Heads" The front face and all visors (inside and outside) shall be flat or semi-gloss black. All other exterior parts shall be Federal Highway yellow. Use only exterior hardware made of stainless steel.

C Construction
Construct according to standard spec 658.

D Measurement
The department will measure Traffic Signal Heads (Description) by each unit, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.089	Traffic Signal Heads-8 Inch-3 Section	Each
SPV.0060.090	Traffic Signal Heads-12 Inch-3 Section	Each
SPV.0060.091	Traffic Signal Heads-12 Inch-4 Section	Each
SPV.0060.092	Traffic Signal Heads-12 Inch-Pedestrian	Each
SPV.0060.093	Traffic Signal Heads-12 Inch-Pedestrian Countdown	Each

Payment is full compensation for furnishing and installing all materials, and for furnishing all equipment and incidentals necessary to complete the work.

100. Pedestrian Scale Street Light Unit, Item SPV 0060.094.

A Description
This special provision describes furnishing and installing Pedestrian Scale Street Light Unit in accordance to the applicable provisions of standard spec 659 and as detailed in the plans.

B Materials
Provide an aluminum pole and LED fixtures as shown on the plans and meeting the following requirements.

1. The aluminum pole shall be a P&K Pole Product, Inc. fluted aluminum Pole, RFTX6L with the following specifications:

   - 11'-8" tall
   - 6" pole diameter above base
   - 4.5" diameter at top
   - 0.156" wall thickness
   - Pole welded to base
   - 12-flat flute pattern
   - 3" OD x 3" tall tenon
   - RAL 6009 Green color with 80% gloss finish

   Poles are required to match what was supplied by P&K poles to the City of Madison in years 2012 and 2013.

2. The pole luminaire shall be a Holophane Utility Washington Postlite, 30 Watt LED, Catalog number WAUE 30 3K AS RAL6009 3 G 2 DM with house side shielding.

C Construction
Construct poles in accordance to the applicable provisions of standard spec 659.3.

D Measurement
The department will measure Pedestrian Scale Street Light Unit as each individual light pole and luminaire, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM	DESCRIPTION	UNIT
SPV.0060.094	Pedestrian Scale Street Light Unit	Each

Payment is full compensation for furnishing, assembling, and installing light poles and luminaires; and for assembly and installation of components.

101. Backplates Signal Face 12-Inch, 3-Section, Item SPV.0060.095; Backplates Signal Face 12-Inch, 4-Section, Item SPV.0060.096.

A Description
This special provision describes furnishing and installing backplates for signal faces.

B Materials
Furnish Backplates Signal Face (Size) that are in accordance to the pertinent requirements of standard spec 658 and these special provisions.

Backplates for 12" signal heads shall provide a 5" wide black band around the signal head. The backplates shall be an approved black rigid material, such as vacuum formed ABS plastic. The backplates shall match the signal heads being furnished under this bid, equipped with all necessary holes, mounting devices. All mounting hardware shall be stainless steel.

C Construction
Install the backplates in accordance to standard spec 658.3, the manufacturer's instructions, and as shown on the plans.

D Measurement
The department will measure Backplates Signal Face (Description) 12-Inch by each unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.095	Backplates Signal Face, 3 Section 12-Inch	Each
SPV.0060.096	Backplates Signal Face, 4 Section 12-Inch	Each

Payment is full compensation for furnishing and installing all materials.

102. Communication Node for Pedestrian Scale Street Light Units, Item SPV.0060.097; Communication Node for Non-Pedestrian Scale Street Light Units, Item SPV.0060.098; Dimming Control Module, Item SPV.0060.099; Roamview Gateway, Item SPV.0060.100.

A Description

This special provision describes providing and installing street light dimming control devices in the street light units installed under other items within the project, and furnishing a system gateway device to the City of Madison.

The contractor shall install devices in accordance to the manufactures recommendations and shall provide the City of Madison with a detailed inventory of the serial numbers and MAC Ids of the devices installed at each light pole location.

B Materials

Furnish and install the following:

1. Roamview Pedestrian Light pole communication Node. Holophane part number RN127 CM1A.
2. Roamview Non-Pedestrian Light pole communication Node. Holophane part number REN127 NM1V.
3. Dimming Control Module. Holophane part number DCM127 NX1.

Furnish the following:

1. Roamview Gateway. Holophane part number REG127 EX5.

C (Vacant)

D Measurement

The department will measure Communication Node for Pedestrial Scale Street Light Units, Communication Node for Non-Pedestrial Scale Street Light Units, Dimming Control Modules, and Roamview Gateway by each individual unit, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.097	Roamview Pedestrian Light Pole Communication Node	Each
SPV.0060.098	Roamview Non-Pedestrian Light Pole Communication	Each
SPV.0060.099	Dimming Control Modules	Each
SPV.0060.100	Roamview Gateway	Each

Payment is full compensation for furnishing and installing all materials including all hardware, fittings, mounting clamps, attachments necessary to complete the items and for furnishing and delivering the Roamview Gateway equipment to the City of Madison, 1120 Sayle Street.

103. Clay Trench Plug, Item SPV.0060.101.

A Description

This work consists of furnishing and installing clay trench plugs as specified below and as shown in the plans.

B Materials

Use select clay fill classified as CL or CH according to the Unified Soil Classification System. Allow a maximum clump size of 6 inches capable of being broken down with normal construction equipment to a size of 2 to 3 inches prior to compaction. Fifty percent or more of the soil particles by weight must pass the Number 200 sieve. Remove rocks, stones, sticks, and other foreign objects greater than 2 inches prior to placement.

C Construction

Maintain proper moisture content to achieve specified compaction. Make water available on site for clay conditioning.

Provide select clay fill in lift thicknesses as required to obtain the specified levels of compaction. Do not exceed maximum lift thicknesses of 4 to 6 inches after compaction. Compact select clay fill using penetrating foot–type compaction equipment having protrusions greater in length than the lift thickness of clay being compacted. Use compaction equipment of sufficient weight to compact clay with reasonable amount of effort in order to achieve the specified levels of compaction.

Place overburden material as soon as practical after completion of select clay fill placement to avoid drying and desiccation of select clay fill.

Provide each layer of fill to the degree that no further appreciable consolidation is evidence under the action of the compaction equipment. Engineer or designee will observe compaction effort and approve final product. Engineer or designee may require that the compaction of the material be to a dry density of 90 percent of the maximum dry density as determined by the Modified Proctor test, or 95 percent of the Standard Proctor maximum dry density.

Required compaction will be attained for each layer before any material for the succeeding layer is placed.

D Measurement
The department will measure Clay Trench Plug by each individual unit that is acceptably completed.

E Payment
The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.101	Clay Trench Plug	Each

Payment is full compensation for all excavation; disposing of excess material; and for furnishing and placing materials.

104. Manholes 3x3-FT Saddled Special, Item SPV.0060.102.

A Description
Work under this item shall include the construction of a drop manhole on top of a storm sewer pipe. This work shall conform to standard spec 611 and herein as described.

B Materials
This work shall conform to standard spec 611.

C Construction
The storm sewer pipe shall be sawcut with a hole saw to provide a 24 inch diameter opening for the drop manhole. A reinforced concrete manhole shall be formed around this opening, and constructed to the required depth as shown in the plans. #4 bars shall be doweled into the pipe to anchor the walls of the manholes and shall be embedded four inches. All reinforcement shall be a minimum of three inches clear of all exposed surfaces of the concrete. All dowels shall be grouted in place with epoxy mortar. The manhole walls shall be reinforced with #4 epoxy coated rebar placed longitudinally 8 inches on center in the vertical direction. The details for the inside dimensions of the opening and other incidentals are shown in the Standard Detail Drawings. Fill flowlines to provide positive drainage and eliminate the possibility of standing water or sediment.

D Measurement
Manholes 3x3-FT Saddled Special shall be measured by each inlet constructed and accepted in the field.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBERS	DESCRIPTION	UNIT
SPV.0060.102	Manholes 3x3-FT Saddled Special	Each

Payment for Manholes 3x3-FT Saddled Special is full compensation for furnishing all work, materials, labor and incidentals required to complete the work set forth in the description.

105. Concrete Curb and Gutter 24-Inch Type D Special, Item SPV.0090.01; Concrete Curb and Gutter 30-Inch Type D Special, Item SPV.0090.02; Concrete Curb and Gutter 24-Inch Type X Special, Item SPV.0090.03; Concrete Curb and Gutter 30-Inch Type X Special, Item SPV.0090.04.

Construct concrete curb and gutter as shown in the plans, and in accordance to standard spec 601.

106. Sign Post, Item SPV.0090.05; Reflective Sign Post, Item SPV.0090.06.

A Description

This special provision describes furnishing and installing new signposts, reflective signposts, and or powder coated signposts for signs. All signposts shall be round tubular steel and installed as shown in the plans.

B Materials

All materials shall conform to the standard specifications for hot rolled carbon sheet steel, commercial quality, ASTM A-570-GR-33 for zinc coated tubing to resist corrosion. The tube shall be 2-inch, Schedule-40. Reflective signpost shall have two sheets of engineer grade yellow sheeting completely around pipe as shown in the plans

C Construction

Install the signposts at the locations shown on the plans and approved by the engineer. If the finished grade cannot be determined, ask the engineer to identify the final grade. All signs shall be in a true vertical position. Install all signs to conform to the latest edition of the Manual on Uniform Traffic Control Devices. Also, locate all underground utilities prior to placing signposts. Cut off excess length of post in the field to provide the desired sign clearance.

All materials damaged during construction shall be replaced with new items at no cost to the department.

D Measurement

The department will measure (Type) Sign Post in accordance to the length shown in the miscellaneous quantities; signposts will be measured by the linear foot.

E Payment

The department will pay for measured quantities at the contract unit price under the following:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.05	Sign Post	LF
SPV.0090.06	Reflective Sign Post	LF

Payment is full compensation for furnishing and installing all necessary posts, reflective sheeting, finials, and hardware and anchors. All materials damaged during construction shall be replaced with new items at no cost to the department.

107. Remove Abandoned Steam Tunnel, Item SPV.0090.07.

A Description

This special provision describes removing abandoned steam tunnel and contents including abatement of asbestos material in accordance to the plans, the pertinent provisions of the standard specifications, and as hereinafter provided.

Steam tunnel is a 3.5-foot by 3.5-foot concrete box with two asbestos wrapped pipes approximately 4-foot deep to the top of structure. The structure has 8-inch walls and bottom and a 4-inch top. The pipes are a 12-inch asbestos wrapped pipe and a 4-inch condensation line with asbestos wrapping. Both pipe wraps have delaminated; asbestos material is friable.

Photographs of existing tunnel can be viewed by contacting Eric Dundee, City of Madison Engineering at (608) 266-4913 or edundee@cityofmadison.com.

B (Vacant)

C Construction

The Regulated Asbestos Containing Material (RACM) must be abated by a licensed abatement contractor. In accordance to NR447 and DHS159, ensure that DNR and DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (r 4/11), or subsequent revision via U.S. mail, hand delivery, or using the online notification system at least 10 days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form and the abatement report to Scott LaCoursiere, (608) 243-6471 and DOT BTS-ESS attn: Hazardous Material Specialist PO Box 7965, Madison, WI 53707-7965. Comply with all Department of Natural Resources and Department of Public Health licensing and regulations for removal and disposal of all asbestos material.

Use the following information to complete WisDNR form 4500-113:

1. Facility Name: East Johnson Street (North Hamilton Street – North Hancock Street)
2. Site Address: 303 North Hamilton Street
3. Ownership Information: City of Madison, 210 Martin Luther King Jr. Blvd, Madison, WI, 53703
4. Contact: Scott LaCoursiere
5. Phone: (608) 243-6471

D Measurement
The department will measure Remove Abandoned Steam Tunnel in length by the linear foot, measured along the centerline of the tunnel, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.07	Remove Abandoned Steam Tunnel	LF

Payment is full compensation for submitting necessary forms; all excavation; removing concrete box and all asbestos; proper disposal of all waste material; and for furnishing and placing backfill; compacting the backfill.

108. Storm Sewer Pipe PVC, 8-Inch, Item SPV.0090.08, 12-Inch, Item SPV.0090.09.

A Description
This special provision describes furnishing and installing storm sewer, 8-Inch PVC and 12-Inch PVC lateral connections as shown on the plans and as hereinafter provided.

B Materials
Furnish PVC pipe and fittings to conform to AASHTO M278 and ASTM D-3034, Type PSM SDR 23.5 PVC Sewer pipe requirements.

C Construction
Verify that positive drainage is achieved when connecting to the new structures. Connect the storm sewer lateral with the appropriate coupling, concrete collar or by means approved by the engineer. All joints shall be solvent welded. Concrete masonry for concrete collar shall be in accordance to standard spec 501. Any additional removals, pipe, or materials required to connect the storm sewer lateral shall be considered incidental to this bid item.

D Measurement
The department will measure Storm Sewer, 8-Inch PVC and 12-Inch PVC in length by the linear foot, measured along the centerline of the pipe, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.08	Storm Sewer, 8-Inch PVC	LF
SPV.0090.09	Storm Sewer, 12-Inch PVC	LF

Payment is full compensation for furnishing all excavation; disposing of excess material; furnishing and placing backfill; compacting the backfill; coring the storm sewer; sealing with Portland cement mortar; furnishing and installing, 8-Inch PVC Pipe and 12-Inch PVC Pipe, elbows and caps.

109. Sanitary Sewer Lateral, Item SPV.0090.10.

A Description

This work consists of excavating required trenches, connecting the lateral to the mainline pipe, placing bedding material, connecting the new lateral to the existing lateral, all required fittings, couplings, and bends, backfilling and compacting the trenches and restoring the work site as provided by the plans, specifications and contract. This work also consists of locating, identifying, and abandoning "inactive" laterals.

B Materials

Furnish sanitary sewer pipe and fittings that are solid-wall Poly Vinyl Chloride (PVC) and that conform to the requirements of the Specification for PVC Sewer Pipe and Fittings, ASTM D 3034.

Provide sanitary sewer pipe and fittings having a standard dimension ratio of 26 and 35.

Furnish elastomeric or solvent cement joints made as recommended by the manufacturer.

Sewer laterals deeper than 12' will be required to be ASTM D3034 SDR-26. AWWA C900 Class 150, DR-18 Pipe type will be installed for laterals where the sewer main being installed is Pressure Sanitary Sewer Pipe. (SPV.0090.013 Sanitary Sewer Pressure Pipe (C900), 8-Inch or SPV.0090.014 Sanitary Sewer Pressure Pipe (C900)16-Inch).

Compression coupling connections to the existing sewer laterals in conformance to Standard Detail Drawing 5.3.3, Coupling detail, from the City of Madison Standard Specifications for Public Works Construction- Latest Edition.

C Construction

Install laterals in accordance to Article 503.3 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

The use of 45-degree bends is not permitted except with connecting to a wye at the sanitary sewer main. Bends of 22.5 degrees or less may be used, provided they are separated by at least two feet of straight pipe. Provide new lateral pipe having a minimum diameter of four inches that is also greater than or equal to the diameter of the adjoining lateral. Connecting a new lateral pipe to an existing lateral having a smaller diameter than the existing lateral is not permitted.

Per the City of Madison Standard Specifications for sanitary sewer lateral construction on street reconstruction projects, contractors are encouraged to begin installation of sanitary lateral pipe at the proposed sewer main. If contractor starts excavation for the lateral at

the property line, it will be at the contractor's risk. A portion of the sanitary sewer laterals were located and surveyed prior to design. Laterals located are marked on the plan as Lateral Located (TYP). If tree conflicts are encountered during the sanitary lateral replacement process, contractors are instructed to follow the new policy set in the Standard Specifications for Public Works Construction, Latest edition. No Utility Line Openings (ULOs) will be granted for the inability to locate the sanitary lateral at the property line. Any extra sidewalk removal will not be compensated to the contractor looking for an existing sanitary lateral at the property line.

Contractors will be required to have a locator device on-site if they intend to start laying lateral pipe at the property line to minimize the amount of extra sidewalk removal. Each sanitary lateral will have a maximum of 4 sidewalk squares removed and replaced. No additional compensation will be awarded beyond this amount for the replacement of a sewer lateral. If laterals called for reinstatement on the plans are to be plugged under the direction of the engineer on-site, contractors are required to use a sonde device to confirm that the laterals that are called abandonment are not active, Couple the junction of a new lateral pipe to an existing lateral pipe as required in the field by the City of Madison. Saw cut the existing main to accommodate a clean joint for the installation of the compression couplings. Placed the coupling as directed by the City of Madison and per Standard Detail Drawing 5.3.3, Coupling Details, from the City of Madison Standard Specifications for Public Works Construction - Latest Edition

D Measurement

The department will measure Sanitary Sewer Lateral, by the linear foot, acceptably completed.

The quantity to be paid will be measured from the connection of the mainline sewer pipe to the connection of the existing sanitary lateral along the centerline of the pipe.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.10	Sanitary Sewer Lateral	LF

Payment is full compensation for determining whether laterals are "active", "inactive", or abandoned, and the exact location and size of "active" lateral reconnections; all labor, tools, equipment and incidentals necessary to complete the work.

Connection of lateral to the proposed sewer main and the first 5 feet of lateral pipe associated with the connection is paid under bid item Sanitary Lateral Reconnect.

Select fill for sanitary sewer later is paid under bid item Select Fill For Sanitary Sewer. The quantity for this item may be increased or decreased beyond the limits set forth in Article 104 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

110. Sanitary Sewer Pipe PVC, 8-Inch, Item SPV.0090.11; 10-Inch, Item SPV.0090.12.

A Description

This special provision describes installing Sanitary Sewer Pipe PVC (size) at the alignment and grades shown on the plan. All sections of the sewer mainline are required to pass a low pressure air test, mandrel test, and a visual inspection via televising as specified in Article 501.3(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. Costs associated with the testing of the gravity main are included in the contract unit price bid for this item.

B Materials

Provide solid-wall Poly (Vinyl Chloride) (PVC) sanitary sewer pipe and fittings meeting the requirements for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, ASTM D 3034.

Provide pipe and fittings having a standard dimension ratio of 26 or 35 as called out on the plan set.

Assemble solvent cement joints using solvent cement obtained from the pipe manufacturer, which conforms to the requirements of ASTM D2564.

The assembled joint will be required to pass the performance tests as required in ASTM D3212. Sewer mains deeper than 12’ will be required to meet the standards or ASTM D3034 SDR-26.

C Construction

Install the sanitary sewer pipe in accordance to all applicable provisions of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

Remove all abandoned or existing material located in the new sanitary sewer alignment. Removal of material (including existing sanitary sewer/water main/etc) is incidental to this bid item.

Use manufactured wye fittings to install new laterals to the new main as called for on the plans; provide and place in accordance to standard spec 503 for Public Works Construction – Latest Edition. Do not install saddle type wyes without prior approval from the city of Madison.

Complete testing and televising of new sewer lines in accordance to Article 501 of the City Standard Specifications for Public Works Construction - Latest Edition.

D Measurement

The department will measure Sanitary Sewer Pipe PVC, (Size) in length by the linear foot, acceptably completed.

Sanitary Sewer Pipe PVC, (Size) will be measured through sanitary sewer structures, from the center of sanitary sewer casting to center of sanitary sewer casting. Sanitary Sewer Pipe PVC (Size) not terminating at a sanitary sewer structure will be measured to the end of pipe. Deductions from the measure length will not be made for wye installations.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.11	Sanitary Sewer Pipe PVC, 8-Inch	LF
SPV.0090.12	Sanitary Sewer Pipe PVC, 10-Inch	LF

Payment is full compensation for furnishing all materials, necessary to perform the work; excavation of the trench, except tunneling and jacking; installation and removal of sheeting and bracing; removal of water from the trench; disposal of surplus material from the trench; backfilling the trench and compaction of the backfill material; embankment over the sewer using surplus material from the excavation of the trench; bedding the pipe; laying the pipe and installing the fittings and accessories; jointing and sealing of joints in pipe, fittings and accessories; encasement, where specified; connections to existing structures; cleaning out the sewer; restoring the site; and all other work incidental to the installation of sanitary sewers.

111. Sanitary Sewer Pressure Pipe (C900), 8-Inch, Item SPV.0090.13 ; 16-Inch, Item SPV.0090.14.

A. Description

Work under this item will include installing Pressure sewer pipe (8” and 16”) at the alignment and grades shown on the plan set.

Conduct a low pressure air test as specified in Article 501.3(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition on all sections of the sewer mainline. A passing test is required in order to be acceptable. Include all costs associated with the testing of the gravity main in the contract unit price bid for this item.

Maintain the normal flow of wastewater at all times during replacement of the existing sanitary sewer main with the new sanitary sewer main. Payment for furnishing all bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the normal flow of wastewater throughout the sewer construction, is under SPV.0105.002 Wastewater Control.

B Materials

Provide all sewer pipe and fittings of solid-wall Poly (Vinyl Chloride) (PVC) conforming to the requirements of the Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, AWWA C900 Class 150, DR-18.

Provide fittings conforming to the requirements of the American National Standard for Ductile- Iron and Gray-Iron fittings for Water and other liquids, ASA A21.10 (AWWA C110) payable separately under Sanitary Lateral Reconnect, Item SPV.0060.022

Provide joints with integral bell with elastomeric gaskets, or couplings with elastomeric gaskets. Make solvent cement as recommended by the manufacturer.

C Construction

Install sewer pipe in accordance to all applicable provisions of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

Remove all abandon or existing material located within 3' of the new sanitary sewer alignment. Removal of material (including existing sanitary sewer/water main/etc) is incidental to this bid item.

Use Ductile Iron Wye pressure rated fittings to install new laterals to the new main as called for on the plans; provide and place in accordance to Article 503 of Standard Specifications for Public Works Construction – Latest Edition.

D Measurement

The department will measure Sanitary Sewer Pressure Pipe (C900), (Inch) by the linear foot, acceptably completed, to the nearest whole foot of each of the various types, classes and sizes of pipe installed at the various depths, measured along the centerline of the pipe center to center of junctions and fittings. The quantity to be paid for includes construction through Sewer Access Structures, from center of Sewer Access Structure casting to center of Sewer Access Structure casting. Main extensions continuing through Sewer Access Structures will be measured from center of Sewer Access Structure casting to the end of pipe. The depths of installation will be measured in feet from the invert of the sewer pipe to the elevation of the existing ground. There will be no deductions from the measured lengths for wye installations.

E Payment

The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.13	Sanitary Sewer Pressure Pipe (C900), 8-Inch	LF
SPV.0090.14	Sanitary Sewer Pressure Pipe (C900), 16-Inch	LF

Payment is full compensation for furnishing all materials, except wyes, necessary to perform the work; excavation of the trench, except tunneling and jacking; installation and removal of sheeting and bracing; removal of water from the trench; disposal of surplus material from the trench; backfilling the trench and compaction of the backfill material; embankment over the sewer using surplus material from the excavation of the trench; bedding the pipe; laying the pipe and installing the fittings and accessories; jointing and

sealing of joints in pipe, fittings and accessories; encasement, where specified; connections to existing structures; cleaning out the sewer; restoring the site; and all other work incidental to the installation of sanitary sewers.

112. Remove Sanitary Sewer Pipe, Item SPV.0090.15.

A Description

Remove sanitary sewer pipe within the right-of-way as called for on the plan set in accordance to Article 203 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. "Pipe to be removed that is in the same trench as a new pipe will not be compensated as remove pipe and will be considered to be incidental to the new pipe installation." The same trench will be considered to be any pipe located with 3' horizontally of the pipe being installed. This includes unidentified pipe that is smaller than 10 inches in diameter. If the pipe to be removed ends along a pipe run, as opposed to ending at a structure, the contractor will end the removal with a saw cut of the existing pipe and plug the remaining end as directed by the engineer. Plugging the structure or pipe to which the pipe being removed was connected will be compensated for under a separate bid item (Abandon Sanitary Sewer - Pipe Plug, Item SPV.0060.031). If the contractor, for his convenience, decides to remove a section of pipe to a full section, the additional removal will not be given consideration for additional compensation.

B (Vacant)

C Construction

Contractor shall sawcut the pipe ends at the pipe removal limits if the pipe as a whole is not called for removal. All pipe removed shall be disposed of by the contractor. All trenches, holes and pits resulting from the removal or abandoning of pipe and other miscellaneous structures will be filled with satisfactory soil or select fill, placed in layers not more than 12 inches in thickness. Select backfill will be required for any structure or pipe within the roadway that will not be filled with another structure or pipe. All fill material required will be considered incidental to the removal or abandonment. Each layer will be thoroughly compacted by means of approved tampers, rollers or vibrators. Water will not be used to expedite settlement of backfill except with the approval of the engineer; this provision shall not be construed to require an excavation to be dewatered before placing backfill, if backfilling can be performed in such manner as to displace the water or prevent its entrapment in the backfill.

D Measurement

The department will measure Remove Sanitary Sewer Pipe by the linear foot, measured along the centerline of the sanitary sewer pipe removed, acceptably completed.

E Payment

The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.15	Remove Sanitary Sewer Pipe	LF

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work Payment will include the Select Fill material required to backfill the trench created by pipe being removed.

113. Utility Trench Patch Type III, Item SPV.0090.16.

A Description
The work under this item will meet the requirements of Article 502 and Standard Detail Drawing 5.2.4 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition for Type III Trench Patch.

B Material
The new crushed stone will meet the requirements of standard spec 305, Base Aggregate Dense, 1 ¼-Inch.

C Construction
Utility Trench patch will be installed in accordance to all applicable provisions of Article 502.1(f) and SDD 5.2.4 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition for Type III Patch. If asphalt is not suitable due to the time of year, concrete patching (SDD.52.4a) may be used without steel reinforcement for patching as called for on the plan or by the engineer.

D Measurement
The department will measure Utility Trench Patch Type III by the linear foot, measured along the centerline of the patch regardless of the type of patch, acceptably completed.

E Payment
The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.16	Utility Trench Patch Type III	LF

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work Payment includes furnishing, placing, consolidating and compacting the materials used to restore the pavement, including asphalt and/or concrete and all other work incidental the installation of utility trench patches. Payment will not include the Select Fill material required to backfill the trench.

114. Select fill for Sanitary Sewer, Item SPV.0090.17.

A Description
This special provisions describes furnishing and placing select fill over the sanitary sewer main and laterals along the entire length of the pipe.

B Materials
Provide select fill meeting the requirements of Article 202.2(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition for select fill for sanitary sewer mains and laterals.

C Construction
Install select fill for sanitary sewer in accordance to all applicable provisions of Article 502.1(e) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

D Measurement
The department will measure Select Fill for Sanitary Sewer in length by the linear foot, acceptably completed. Measurement will be completed along the centerline of the installed sanitary sewer pipe and includes the length through Sewer Access Structures.

E. Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.17	Select Fill For Sanitary Sewer	LF

Payment is full compensation for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work.

115. Furnish and Install 4-Inch Pipe and Fittings, Item SPV.0090.18; 6-Inch, Item SPV.0090.19; 8-Inch, Item SPV.0090.20; 10-Inch, Item SPV.0090.21; 12-Inch, Item SPV.0090.22; 16-Inch, Item SPV.0090.23; 20-Inch, Item SPV.0090.24.

A Description
Furnish and install pipe and fittings of the size and type specified in the plans, these specifications and in accordance to section 704.6 of the *City Standard Specifications*.

B Materials
Furnish restrained joint ductile iron pipe manufactured in accordance to the requirements of ANSI/AWWA C151/A21.51. Push-on joints for such pipe must be in accordance to ANSI/AWWA C111/A21.11 "Rubber-Gasket Joints for Ductile-Iron Pipe and Fittings." Pipe must be designed in accordance to ANSI/AWWA C150/A21.50 “Thickness Design of Ductile-Iron Pressure Pipe.” Use thickness class 52 pipe.

Cement mortar lining and seal coating for pipe and fittings, where applicable, must be in accordance to ANSI/AWWA C104/A21.4. Asphaltic outside coating shall be in accordance to ANSI/AWWA C151/A21.51 for pipe and ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 for fittings. Restrained push-on joints for pipe must be designed for a working pressure of 350 psi.

Furnish mechanical joint ductile iron pipe fittings in accordance to section 702.2 of the *City Standard Specifications*.

Furnish nitrile and fluorocarbon gaskets in place of rubber gaskets where shown on the plans.

C Construction

Install water main pipe and fittings in accordance to manufacturer's recommendations and sections 703 and 704.21(3) of the *City Standard Specifications.* Maintain all required clearances with other facilities.

Install nitrile and fluorocarbon gaskets in place of rubber gaskets where shown on the plans.

D Measurement

The department will measure Furnish and Install (Size) Pipe and Fittings by the linear foot, in accordance to section 704.6 of the *City Standard Specifications*.

All fittings and gaskets, including nitrile and fluorocarbon gaskets, shown on the plan set and those required on hydrant leads per the General Provisions for City of Madison Water Main are included in the linear foot price for Water Pipe and Fittings. Any additional fittings such as bends, offsets, tees, and reducers that are not specified on the plans or required in these specifications will be measured by the unit acceptably completed. The engineer must provide written authority to allow any installations of additional fittings.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.18	Furnish and Install 4 Inch Pipe and Fittings	LF
SPV.0090.19	Furnish and Install 6 Inch Pipe and Fittings	LF
SPV.0090.20	Furnish and Install 8 Inch Pipe and Fittings	LF
SPV.0090.21	Furnish and Install 10 Inch Pipe and Fittings	LF
SPV.0090.22	Furnish and Install 12 Inch Pipe and Fittings	LF
SPV.0090.23	Furnish and Install 16 Inch Pipe and Fittings	LF
SPV.0090.24	Furnish and Install 20 Inch Pipe and Fittings	LF

Where authorized, the department will pay for additional fittings as follows:

DESCRIPTION	UNIT	PRICE
4-Inch Fitting	Each	$590.00
6-Inch Fitting	Each	$720.00
8-Inch Fitting	Each	$975.00
10-Inch Fitting	Each	$1,235.00
12-Inch Fitting	Each	$1,510.00

DESCRIPTION	UNIT	PRICE
16-Inch Fitting	Each	$2,200.00
20-Inch Fitting	Each	$2760.00

Additional fittings to be paid will be offset by any fittings identified on the plan set to be furnished and installed, but that were not furnished and installed. Additional tee fittings will be paid as 1.5 fittings. Additional offset or cross fittings will be paid as 2 fittings.

Payment is full compensation in accordance to section 704.6 and 704.21 of the *City Standard Specifications*. Additional fittings will be paid in accordance to section 104 of the *City Standard Specifications*.

116. Select Fill for Water Main, Item SPV.0090.25.

A Description

This special provision describes furnishing and placing select fill backfill over the water main along the entire length of the pipeline in accordance to section 704.8 of the *City Standard Specifications*.

B Materials

Provide Select Fill for Water Main meeting the requirements of section 202.2 (b) and section 703 of the *City Standard Specifications*.

C Construction

Place Select Fill for Water Main in accordance to section 703 of the *City Standard Specifications.*

D Measurement

The department will measure Select Fill for Water Main by the linear foot, in accordance to section 704.8 of the *City Standard Specifications*.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.25	Select Fill for Water Main	LF

Payment is full compensation for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work as specified herein.

117. Furnish and Install 2-Inch Foam Board Insulation, Item SPV.0090.26.

A Description

Furnish and install foam board insulation consists of placing rigid foam board in order to insulate water mains and/or water service laterals. This section includes but is not necessarily limited to; all materials, equipment, labor and incidentals necessary to

complete the insulation of the pipe, and shall be executed in compliance with section 704.13 of the *City Standard Specifications.*

B Materials
Provide foam board insulation complying with section 702.12 of the *City Standard Specifications*.

C Construction
Install foam board insulation at all locations where there is five (5) or less feet of cover, where water main crosses below existing or proposed storm sewer pipe, or when specified, shown on the drawings or ordered by the engineer conforming to section 703.13 of the *City Standard Specifications.*

D Measurement
The department will measure Furnish and Install Foam Board Insulation by length in feet of pipe insulated along the centerline of the pipe at the surface, acceptably completed.

E Payment
The department will pay for foam board at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.26	Furnish and Install Foam Board Insulation	LF

Payment per foot shall be full compensation for furnishing all work in insulating the pipe as required. Broken insulation shall not be considered for payment.

118. Extend and Reconnect 1-Inch Service Lateral, Item SPV.0090.27; 1.5-Inch, SPV.0090.28; 2-Inch, SPV.0090.29.

A Description
This work consists of extending and reconnecting the existing copper water service laterals to the new water main, and all related incidentals.

B Materials
Furnish all materials for tapping the new main, extending and reconnecting the copper water service laterals in accordance to section 702 of the City Standard Specifications.

C Construction
Excavate to expose the existing water main at the existing service connection. Cut off the copper pipe at this location. Couple the disconnected end of the service with a new service of the designated size, extend this length to the new water main, and reconnect the new service length to the new corporation stop. For laterals that are called to be cased, extend the lateral from the service end of the lateral to the new main. Connect to the existing lateral at a point such that the lateral is installed per the Case Water Lateral specification and detail. Perform all work in accordance to section 703 of City Standard Specifications.

D Measurement
The department will measure Extend and Reconnect (Size) Service Lateral by length in feet along the centerline of the lateral at the surface from the center of the water main to the point of the connection, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.27	Extend and Reconnect Service Lateral 1-Inch	LF
SPV.0090.28	Extend and Reconnect Service Lateral 1.5-Inch	LF
SPV.0090.29	Extend and Reconnect Service Lateral 2-Inch	LF

Payment is full compensation for all excavation; disposing of excess material; and for furnishing and placing materials.

119. Replace Copper Service Lateral 1-Inch, SPV.0090.30; 1.5-Inch and 2-Inch, SPV.0090.31.

A Description
The work under this item shall include but not necessarily be limited to; furnishing all labor and materials, including all required fittings; curb box and stop; excavating the trench; installing and removing sheeting and bracing; trimming tree roots as needed per section 107.13 of the *City Standard Specifications*; dewatering; backfilling the trench; compacting the backfill material; making the tap; bedding the pipe; laying the pipe; installing fittings and curb box; installing and/or repairing polyethylene encasement; restoration; adjusting the curb box to finish grade and other work incidental to the installation of replacing copper service laterals. This item also includes abandoning the existing service, curb box and stop.

B Materials
Provide all materials conforming to the requirements of section 702 of the *City Standard Specifications*.

C Construction
Construct all associated work conforming to the requirements of section 703 of the *City Standard Specifications*.

D Measurement
The department will measure Replace Copper Service Lateral (Size) by length in feet of the pipe installed, acceptably completed, measured along the centerline of the service lateral at the surface from the center of the water main to the center of the curb stop. If the Construction Inspector or engineer relocates a curb stop due to conflict, tail extensions beyond the curb stop will be paid along the centerline of the service lateral at the surface from the curb stop to the property service connection.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.30	Replace Copper Service Lateral – 1-Inch	LF
SPV.0090.31	Replace Copper Service Lateral – 1.5-Inch and 2-Inch	LF

Payment is full compensation for furnishing all associated work as specified herein.

120. Electrical Wire Lighting, 14-3 Grounded, Item SPV.0090.32.

A Description
This special provision describes furnishing and installing electrical wire lighting, 14-3 type UF cable according to standard spec 655 and these specifications.

B Material
Furnish type UF cable with ground including the number and size of conductors as the plans show. Use cable conforming to ANSI/UL 493.

C Construction
Furnish and install one cable to each LED luminaire from base of pole to the luminaire. Luminaires designated as all night (A) are to have both drivers wired to the all-night lighting circuit. Type 2 and Type 3 Luminaires designated as midnight (M) are to have one driver wired to the all-night lighting circuit and the other to the midnight lighting circuit.

D Measurement
The department will measure Electrical Wire Lighting, 14-3 Grounded by the linear foot, acceptably completed, measured from the splice with the system lighting circuit in the pole base to the connection terminals in the luminaire.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.32	Electrical Wire Lighting, 14-3 Grounded	LF

Payment is full compensation for furnishing and installing all materials.

121. Loop Detector Lead-In Cable Special, Item SPV.0090.33.

A Description
This special provision describes furnishing and installing loop detector lead in cable according to standard spec 655.

B Materials
Furnish 0.25 inch diameter, 4-conductor, #18 AWG, waterproof, shielded, polypropylene insulation cable, with HDPE outer jacket. Meeting IMSA specifications. Provide loop detector lead in cable to be smooth on the outside without any ripples or ribbing from cable wires.

C Construction
Furnish and install one cable for every two loops from each loop handhole to the intersection control cabinet via the most direct route, without intermediate splicing. Most of the loops will be new and are shown on the plan. Install cable for some existing loops. Verify cable needs with the City of Madison Traffic Engineering staff before completing intersection wiring.

D Measurement
The department will measure Loop Detector Lead In Cable by the linear foot, acceptably completed, measured from the splice with the loop lead in wire along the centerline of the conduit to its connection with terminals in the control cabinet.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.33	Loop Detector Lead In Cable Special	LF

Payment is full compensation for furnishing and installing all materials.

122. Fiber Optic Cable 72-Count, Item SPV.0090.34.

A Description
This special provision describes furnishing and installing 72-count as specified in standard specs 651, 655, 670, and 678, as shown on the plans, and as provided hereinafter.

B Materials
Furnish single mode (SM), lt armored, loose-tube 72 count fiber optic cable rated for outdoor use.

All fiber optic cable glass shall be supplied by the same manufacturer and shall be part of a fiber optic cable utilizing loose tube construction with the following properties:

Parameters	Single Mode
Type	Step Index
Core Diameter	8.3 µm (nominal)
Cladding Diameter	125 ± 1.0 µm
Core to Cladding Offset	≤0.8 µm
Coating Diameter	245 ± 10 µm
Cladding Non-Circularity	≤1.0%
Proof Tensile Test	0.7 GPa
Attenuation	@ 1310 nm ≤ 0.4 dB/km @ 1550 nm ≤ 0.3 dB/km
Chromatic Dispersion Zero Dispersion	1310 ± nm (centered on a nominal operating wavelength of 1310)
Zero Dispersion Slope	≤ 0.092 ps/nm²/km
Maximum Dispersion	≤ 2.8 ps/nm/km at 1285 – 1330 nm
Cut-Off Wavelength	1260 nm

C Construction
Follow all manufacturer's recommended installation procedures.

Contact Mike Christoph at the City of Madison Traffic Engineering shop at (608) 266-9031 a minimum of 7 working days in advance to coordinate installing equipment in existing traffic signal cabinet.

D Measurement
The department will measure Fiber-Optic Cable-72-Count by the linear foot, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.34	Fiber-Optic Cable-72-Count	LF

Payment is full compensation for furnishing and installing the fiber optic cable.

123. Sand Thermal Backfill, Item SPV.0090.35.

A Description
Work under this bid item will include placing Sand Thermal Backfill around ATC's 69KV lines located on East Johnson Street in order to install the proposed storm sewer improvements. Furnish and install sand thermal backfill as mainline storm sewer backfill

material on the south side of the proposed pipe where installation is within 2 feet of the ATC's existing 69KV line.

B Materials

The Sand Thermal Backfill shall consist of well graded sand or finely crushed stone screenings and will be free of stones, organics, trash and debris. Small amounts of additional binders may be blended with poorly graded sands to meet the thermal performance requirements stated herein. Approved binders are cement or lime in quantities of less than 2 percent or less than 10 percent clay. All blended formulations must be thermal tested by a qualified firm approved by ATC.

The maximum RHO (ρ) for the thermal fill materials is 50 ºC·cm/W at 5% moisture content and 150 ºC·cm/W at totally dry conditions (0% moisture content) when compacted to 95% of maximum Proctor dry density.

Thermal granular material shall be graded within the following limits:

Sieve Size (ASTM E11)	**Percent Passing (by weight)**
No. 4 (4.75 mm)	100
No. 10 (2.0 mm)	65-100
No. 30 (600 µm)	28-48
No. 50 (300 µm)	17-32
No. 100 (150 µm)	12-28
No. 200 (75 µm)	8-18

Use suppliers of Sand Thermal Backfill that have been previously approved by ATC or an approved equal. Obtain ATC's approval of other suppliers prior to supplying the Backfill. Approved suppliers of Sand Thermal Backfill include:

Hammersley Stone Company Inc
6291 Lacy Road
Fitchburg, WI 53593-9262
(608) 845-7804

Madison Sand and Gravel
5349 Norway Grove School Road
De Forest, WI 53532-1949
(608) 846-4333

Yahara Materials Inc.
6117 County Road K
Waunakee, WI 53597-9418
(608) 849-4162

C Construction
Work will be completed in accordance of ATC's requirements for Sand Thermal Backfill including the following.

Only use Sand Thermal Backfill material around the ATC cable system that has been tested and approved per the above requirements.

Removal all debris and standing water from the trench prior to placement of the Sand Thermal Backfill.

Compact all placed Sand Thermal Backfill to assure expected thermal performance and minimize settlement. Place the Sand Thermal Backfill material at a moisture content of 8 to 12 percent. Water may be mixed with the backfill or sprayed on each lift. Watering is incidental to this bid item. Place the Sand Thermal Backfill in lifts not to exceed 6" of uncompacted thickness when within 2 feet of any part of the cable system. Within the trench confines, compact material with a vibrating plate or dynamic impact type compactor. Ramming or drop weight compaction will not be allowed. Do not use any mechanical compaction when within 3" of pipe-type or direct buried cable systems. Compaction of the Sand Thermal Backfill will be to 95% maximum dry density.

Take care when placing and compacting the Sand Thermal Backfill so that any voids are eliminated and that the cable system is not exposed to damage.

D Measurement
The department will measure Sand Thermal Backfill in length by the linear foot, measured along the centerline of the installed storm sewer pipe, acceptably completed. The amount of Sand Thermal Backfill is estimated to be 8 square feet of sand per linear foot. Any additional Sand Thermal Backfill used will be considered incidental to the contract unit bid price.

E. Payment
The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.35	Sand Thermal Backfill	LF

Payment is full compensation for furnishing all excavation; disposing of excess material; and for furnishing and placing backfill.

124. Project Dewatering, Item SPV.0105.01.

A Description
This section describes dewatering the site during construction or working with the water on-site in a manner that allows the project to be constructed in accordance to the plans and specifications. This item includes removal of any water entering a trench or

excavation including but not limited to groundwater, surface water runoff and/or trench dewatering, both clean and potentially contaminated.

Groundwater is expected to be encountered during excavation for the sanitary sewer. Provide and maintain ample means and devices with which to promptly remove all water entering excavations, trenches, and other parts of the work and keep said excavations dry until the structures to be built therein are completed.

Installation of concrete or masonry structures will not be acceptable if placed in water or if water is allowed to rise over masonry or concrete and there is danger of flotation or of setting up unequal pressures in the concrete until the concrete has set at least 24 hours and any danger of flotation has been removed.

The contractor is responsible for all work, materials and equipment required to comply with permit conditions to dewater the site. At a minimum, pump water into a settling tank, or alternate method approved by the engineer, to settle solids prior to discharge into the storm sewer for clean water and into the designated sanitary sewer for potentially contaminated water.

Potentially contaminated zones of groundwater are marked on the construction plan set. Conform with the requirements of standard spec 205, pertinent parts of the Wisconsin Administrative Code (Department of Natural Resources Environmental Investigation and Remediation of Environmental Contamination, Chapters NR 700-736), as shown on the construction plan set, and as supplemented herein. Comply with all permit requirements and applicable regulations, and monitor the discharge volume of potentially contaminated water generated as necessary to meet the permit requirements. This bid item is intended for all sub-surface utility work for which dewatering may be necessary including sanitary sewer, water main, storm sewer, electrical and traffic signal construction.

B General

Discharge clean water (of any type or from any source) to the storm sewer system. For the purposes of this project suspended solids will not be considered a type of contamination.

Provide all equipment and personnel necessary to conduct dewatering operations as required for the proper completion of the work. Prepare a dewatering plan and submit it to the engineer for review and approval prior to starting dewatering operations. The plan shall include a description of the proposed dewatering methods and maps or drawings indicating the location of the dewatering facilities and points of surface discharge of the water.

The contractor is solely responsible for choosing a method of water control that is compatible with the constraints defined. The contractor is responsible for the adequacy of the water control system and will take all necessary measures to ensure that the water control operation will not endanger or damage any existing adjacent utility or structure.

Design, install and operate the method or methods of water control in such a manner as to provide satisfactory working conditions and to maintain the progress of work. Design the methods and systems so as to avoid settlement or damage to adjacent property in accordance to the applicable legislative statutes and judicial decisions of the State of Wisconsin. All required pumping, drainage and disposal of water will be done without damage to adjacent property or structures, or to the operations of other contractors and without interference with the access rights of public or private parties.

Review and approval of the dewatering plan does not relieve the contractor of the dewatering requirements stated in these specifications. The engineer assumes no liability for the performance or safety of the dewatering system.

Comply with all local ordinances and state statutes for the disposal of water from dewatering operations. Further, it is the contractor's responsibility to contact the Wisconsin Department of Natural Resources Private Water Supply Section prior to construction for dewatering discharge requirements and permits and to comply with all conditions of the Department of Natural Resources. In accordance to Paragraph 144.025(2)(e), Wisconsin Statutes, permits are required for all groundwater control wells that singly or in aggregate produce 70 or more gallons per minute. All wells shall be drilled and sealed in accordance to requirements of the WDNR for installing and abandoning wells. The contact for obtaining well permits is:

Wisconsin Department of Natural Resources
Private Water Supply Section
Box 7921
Madison, Wisconsin 53707
(608) 261-6421
http://dnr.wi.gov/topic/Wells/dewatering.html

File a copy of the permit with the owner 48 hours prior to commencement of any dewatering.

Discharge potentially contaminated water from the zones as indicated on the construction plan set or as directed by the engineer to the sanitary sewer. For the purposes of this project suspended solids shall not be considered a type of contamination. Do not discharge contaminated groundwater without prior approval from the Environmental Consultant.

Obtain a *City of Madison Permit to Discharge to the Sanitary Sewer* compliant with all local ordinances and state statutes. The permit will require that the contractor monitor the volume of total water discharged into the sanitary sewer and will determine the necessary reporting frequency. The contact for obtaining this permit is:

Tim Troester
City of Madison Engineering
(608) 267-1995
ttroester@cityofmadison.com

The City's Environmental Consultant will be responsible for obtaining the necessary approvals from the Madison Metropolitan Sewerage District (MMSD) for disposal of potentially contaminated groundwater. This approval will be issued at the same time as the *Permit to Discharge to the Sanitary Sewer.* Submit a dewatering plan to the City of Madison for approval with the application for *Permit to Discharge to the Sanitary Sewer.*

The contact for the City's Environmental Consultant is:

Brynn Bemis
City of Madison Engineering
(608) 267-1986
bbemis@cityofmadison.com

C Construction
Supplement standard spec 205.3 with the following:

Water shall not be allowed in trenches while pipe is being laid.

No masonry shall be installed in water nor shall water be allowed to rise over masonry or concrete if there is danger of flotation or of setting up unequal pressures in the concrete until the concrete has set at least 24 hours and any danger of flotation has been removed.

Dewater in such a manner that assures safe working conditions and provides stable trench side slopes and trench bottom for adequate support of the pipe and appurtenances. Dewater sufficiently to minimize or eliminate groundwater pressures below the proposed trench bottom which otherwise may tend to cause boiling or a "quick" condition at the trench bottom. Where silty sands or other impervious soils are encountered at and/or below the pipe zone, the dewatering equipment must be adequate to relieve the groundwater pressure below the impervious soil layer and accomplish sufficient drainage of the impervious soils to provide a stable trench bottom.

Pump water from the dewatering operations directly to a minimum 1,500 gallon holding tank, or alternate method approved by the engineer, to allow for settlement of large solids. Periodically pump clean water from the top of the settling tank into the storm sewer system. Periodically pump potentially contaminated water from the top of the settling tank into the approved sanitary sewer. Provide a meter to measure the volume of potentially contaminated water discharged to the sanitary sewer system.

If free phase petroleum product, such as gasoline floating on the water, is observed during dewatering activities, terminate dewatering activities and notify the engineer and the Environmental Consultant.

Notify the engineer at least three days in advance of any proposed changes to the dewatering plan.

Any flooding or erosion damage caused by dewatering operations is the responsibility of the contractor. If flooding or erosion damage occurs, take immediate steps to eliminate those conditions and to correct any damage. The control of all surface and subsurface water, ice, and snow are considered part of the dewatering. Erosion control shall be exercised at all times, including the placement of silt fences, sedimentation basins and any other devices necessary for proper control.

Dispose of all water removed so as not to endanger public health, private and public property or completed work. Use only electrically driven pumps for dewatering operations. Comply with local requirements for noise control for all equipment utilized as part of the dewatering system (Madison General Ordinance 24.08). Provide sufficient mufflers or other noise reduction devices necessary to minimize the noise of the equipment. If ordered by the engineer, reduce noise to an acceptable level (as determined by the engineer) or supply an alternate system capable of meeting the noise requirements. This applies to any equipment utilized as part of the dewatering system.

Provide stand-by equipment to maintain continuous dewatering in the event of mechanical breakdown to part of the system.

The contractor is responsible for removal and/or abandonment of dewatering wells. Removal and/or abandonment shall conform to all state and local regulations.

D Measurement

The department will measure Project Dewatering as a single complete lump sum unit of work, completed in accordance to the contract and accepted.

Measure dewatering of potentially contaminated water and provide this information to the engineer at the frequency determined by the *Permit to Discharge to the Sanitary Sewer.* This information will not be used as a basis of payment.

E Payment

The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Project Dewatering	LS

Payment is full compensation for furnishing all work necessary for pumping, measuring of potentially contaminated water, settling and discharging water, both clean and potentially contaminated; for paying permit fees required; for eliminating and correcting all flooding or erosion damage caused by dewatering operations.

No disposal fees are required by the City of Madison for discharge to the storm sewer system. The City of Madison will pay for any disposal fees required by MMSD for the discharge of water to the sanitary sewer system.

125. Wastewater Control, Item SPV.0105.02.

A Description
Work under this item includes controlling or diverting, to the city of Madison's satisfaction, sanitary sewer flows during reconstruction of the sanitary sewer.

B (Vacant)

C Construction
Provide a pump with a capacity of 200 gallons per minute for bid item Wastewater Control 200 gallons per minute and all associated equipment required to maintain a functioning sanitary sewer system during construction. It is not acceptable, at any time, to disrupt normal flow of wastewater in sanitary sewer service laterals without prior approval from the city of Madison. This condition also holds at the time of connection of an existing lateral to the new sewer main.

If the contractor elects to use bypass pumping as a means of wastewater control, the methods, equipment, type of hose, etc. are subject to approval by the City of Madison Engineer. Ramp any hoses crossing streets, driveways, parking areas, etc., to prevent damage to hoses. Contain spillage of wastewater to be within the utility trench and dispose of spillage into existing sewer downstream to previously installed sewer piping. Spillage of wastewater to adjacent streets, lawns, etc. not will be tolerated. Should spillage occur, cease all construction operations immediately and begin cleanup operations. Clean site thoroughly to the satisfaction of the engineer prior to the resumption of any construction operations.

D Measurement
The department will measure Wastewater Control as a single complete lump sum unit of work completed in accordance to the contract and accepted.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV. 0105.02	Wastewater Control	LS

Payment is full compensation for furnishing all labor, tools, equipment and other incidentals to complete the contract work.

126. Construction Staking Sanitary Sewer, Item SPV.0105.03.

A Description
Perform work in accordance to the applicable provisions of standard spec 650.

B (Vacant)

C Construction
Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Set and maintain a minimum of two construction stakes to establish location and grade of sanitary sewer structures in accordance to the plans and details for sanitary sewer structures. Set and maintain construction stakes to establish location and grade of sanitary sewer main. Provide stakes that establish the horizontal and grade elevation of sanitary main at intervals of 25 feet for a minimum of 100 feet from each structure and at intervals of 50 feet thereafter. Determine offsets in conjunction with contractor requirements. Verify the invert elevations of existing structures which are to remain and be connected into. Locate all stakes included in this bid item to within 0.02 feet horizontally and establish the grade elevation to within 0.01 feet vertically.

Place additional intermittent stakes as necessary to provide staking information at critical areas such as utility, driveway, roadway, and structure crossings.

D Measurement
The department will measure Construction Staking Sanitary Sewer (Project 5992-09-12) as a single complete lump sum unit of work, completed in accordance to the contract and accepted.

E Payment
The department will pay for measured quantities at the contract unity price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Construction Staking for Sanitary Sewer	LS

Payment is full compensation for locating and setting all construction stakes; and for relocating and resetting damaged or missing construction stakes.

127. Construction Staking Water Main, Item SPV.0105.04.

A Description
Perform the work in accordance to the applicable provisions of standard specs 650.3.2 and 650.3.6.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Construction Staking Water Main by the lump sum, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.04	Construction Staking Water Main	LS

Payment for Construction Staking Water Main is full compensation for locating and setting all construction stakes; for relocating and resetting damaged or missing construction stakes and all others incidentals required to perform the work.

128. Optical Signal Preempt; Item SPV.0105.05.

A Description
This special provision describes furnishing and installing optical signal preempt equipment for the six signalized intersections. The acceptability of alternate equipment rests solely with the City of Madison Traffic Engineering Division.

B Materials
Provide the following material:

1. Two channel discriminator for each of six intersections.
2. Optical detectors, eight total.
3. Card rack for each intersection, six total.
4. Detector cable as necessary.
5. Cables and auxiliary equipment as necessary for a complete operating system.

Provide all equipment from the same manufacturer and fully compatible. The discriminator shall detect and prioritize Tomar and Opticom brand emitters. The discriminator shall be capable of locking out non-coded emitters. The acceptability of equipment rests solely with the City of Madison Traffic Engineering Division.

C Construction
Install detectors on the top horizontal member of monotube arms, between the first and second traffic signal head, and as otherwise shown on the plan or directed by Madison Traffic Engineering.

The detectors will generally be on the far side of the intersection, and aimed at approaching traffic, as further directed by Madison Traffic Engineering staff. Install detector cable from the detector to the control cabinet at each intersection, using the shortest path.

All installation methods to be consistent with the manufacturer's instructions. Card rack and discriminator installation, as well as cabinet connections, will be made by City of Madison Traffic Engineering staff.

D Measurement
The department will measure Optical Signal Preempt as a single lump sum unit of work for optical signal preempt, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Optical Signal Preempt	LS

Payment is full compensation furnishing and installing detectors and cable; for furnishing and delivering discriminators, card racks, cables and miscellaneous materials to the city Traffic Engineering Field Office, 1120 Sayle Street.

129. Temporary Traffic Signals (Butler-Hamilton-Johnson); Item SPV.0105.06; Temporary Traffic Signals (Blount-Johnson); Item SPV.0105.07; Temporary Traffic Signals (Paterson -Johnson); Item SPV.0105.08; Temporary Traffic Signals (Ingersoll-Johnson); Item SPV.0105.09; Temporary Traffic Signals (Baldwin -Johnson); Item SPV.0105.10.

A Description
This special provision describes installing temporary traffic signals for intersections, using overhead electrical wiring to temporary traffic signal poles and temporary supports, in accordance to standard spec 661 and as amended herein.

The City of Madison traffic signal personnel will perform the traffic signal inspection.

B Materials
Furnish and use materials that are in accordance to standard spec 661.2 and as amended herein.

Furnish and install Opticom signal preempt for the temporary signals. The following approach directions each need to be detected and brought back individually to the signal control cabinet: northbound, eastbound and westbound at Mineral Point and Junction Road intersection, southbound, northbound and westbound at South Junction and Watts Road intersection, and eastbound and westbound at Mineral Point Road (CTH S) and Jug Handle intersection.

B.1 Luminaires
Furnish and install luminaire arms and luminaries conforming to the pertinent requirements of standard specS 657 and 659. The luminaries shall be 400 watt, full cutoff, high-pressure sodium and shall be furnished with photo electric cells to turn the luminaire on and off.

B.2 Signal Poles and Signal Faces
Furnish new or used poles and traffic signal standards for use in temporary signals conforming to the pertinent requirements of standard specS 657 and 661. Furnish signal faces in accordance to standard spec 661.2.2.2.

B.3 Pedestrian Push Buttons
Furnish pedestrian push buttons conforming to standard spec 658.

B.4 Signal Cabinet
Cabinet shall have room for City of Madison personal to install cellular Ethernet communication equipment and video camera equipment. City of Madison personal shall be provide access for purposes of installing and maintaining the Ethernet and video camera equipment as needed. Furnish new or equivalent to new materials as specified in standard spec 661.2 and as follows:

B.5 Controller
Furnish a new or equivalent to new Econolite ASC3-2100 controller with Ethernet port for each Econolite Controller. The controller shall be compatible with the City of Madison closed loop system (CLS).

B.6 Conflict Monitor
Furnish a new or equivalent to new NEMA+ 12-Channel Signal Conflict Monitor, with LCD display, and an Ejector Tab card release on side of card.

Provide keys to the temporary signal control cabinet to the City of Madison in addition to other required keys in accordance to standard spec 661.2.1.

C Construction
C.1 General
The City of Madison will load the timing programs into the controller.

Do not use new permanent signal conduit for temporary signal wiring. Provide horizontal and vertical clearance between sidewalks and guy wires.

Arrange for all required electrical service modifications with the utility. Pay all utility company installation costs for modifications required to maintain the Temporary Traffic Signal. The City of Madison will pay for energy costs.

Locate and avoid all underground and aboveground utilities and structures. Install temporary supports as required to avoid conflicts with proposed curb and gutter, sidewalk, and traffic signal poles. The engineer will approve the final location of wood poles prior to installation.

Use of self-supporting poles will likely be required due to limited right-of-way limitations and depending on contractor operations.
Maintain temporary signals throughout the construction of the project, until such time that the new signals are operational and have been accepted by, and turned over to the city.

C.2 Existing City Equipment
City forces will remove all existing signal equipment after temporary signals are in place. Contact Michael Christoph at (608) 266- 9031 to coordinate signal removals.

C.3 Signal Heads
Install signal heads for the same vehicle travel direction at a minimum of 11 feet from each other. Provide pedestrian signals for each crosswalk open to pedestrians and locate them so that they are clearly visible to pedestrians prior to and during their crossing. Move signal heads as necessary or as directed by the engineer.

C.4 Pedestrian Push Buttons
Install pedestrian push buttons for pedestrian crossings. Mount push buttons so that they are wheelchair accessible from temporary crosswalks. Install pedestrian push buttons as required by the MUTCD chapter 4.

C.5 Luminaires
Orient luminaries as shown on the plans to illuminate both traffic lanes and sidewalks on both sides of the respective street.

C.6 Cabinet
Provide a representative of the supplier of their cabinet on site at the time of the turn on. Install equipment in the cabinet as follows:

C.6.1 Controller
Install the controller and ensure that it is operational as part of the City of Madison closed loop system.

C.7 Maintenance
When a signal installation is not in operation, hood, turn, or take down the signal head(s) to clearly indicate that the signal is not in operation. (See MUTCD 4D-1).

C.8 Pre-emption Hardware, Cable, and Equipment
Install detector cards, sensors, cables, and all required ancillary equipment, appurtenances and mounting hardware at the temporary signals to provide a fully functioning pre-emption system. Arrange testing of the pre-emption system with Mike Christoph, (608) 266-9031 before turn-on of the temporary signal.

C.9 Contractor Qualifications
Demonstrate the ability to operate all required traffic signal equipment listed in this special provision for the engineer and the City of Madison prior to starting work.

Provide proof of the ability to obtain all required traffic signal equipment listed in this special provision to the engineer and the City of Madison prior to starting work.

D Measurement
The department will measure Temporary Traffic Signals (Location) as a single complete lump sum unit of work, completed in accordance to the contract and accepted, and in accordance to standard spec 661.4.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.06	Temporary Traffic Signals (Butler-Hamilton- Johnson)	LS
SPV.0105.07	Temporary Traffic Signals (Blount- Johnson)	LS
SPV.0105.08	Temporary Traffic Signals (Paterson- Johnson)	LS
SPV.0105.09	Temporary Traffic Signals (Ingersoll- Johnson)	LS
SPV.0105.10	Temporary Traffic Signals (Baldwin Johnson)	LS

Payment is full compensation in accordance to standard spec 661.5.

130. Temporary Vehicle Detection (Butler-Hamilton-Johnson); Item SPV.0105.11; Temporary Vehicle Detection (Baldwin-Johnson); Item SPV.0105.12.

A Description
This special provision describes furnishing, installing and maintaining vehicle detection systems at the intersections of Butler-Hamilton-Johnson and Baldwin-Johnson in conjunction with temporary traffic signals as shown in the plans. The desired vehicle detection zones and their operational parameters are show in the plans.

B Materials
Provide all necessary equipment for the approved method of temporary vehicle detection.

Select, with approval of the engineer and City of Madison, the vehicle detection technology best suited for the site conditions and the anticipated construction work zones and activities. The engineer reserves the right to request a demonstration of any or all

temporary vehicle detection technologies prior to said approval. Vehicle detection technologies considered shall include; but are not limited to, temporary inductive loops, microwave detection, or video detection. Detection technology shall provide for true presence detection.

C Construction

Damage to new pavement for temporary detection loops will not be allowed. Any pavement damaged during installation shall be replaced at the contractor's expense.

Provide immediate response, 24-hour/7-days per week, to maintain any aspect of the temporary vehicle detection that is defective, completing repairs or adjustments the same day as notification.

Adjust, relocate, add, or remove temporary vehicle detection equipment for each traffic control stage or sub stage as shown in the plans, request by the engineer, or as modified by the contractor's operations to maintain the required traffic and complete the proposed work.

D Measurement

The department will measure Temporary Vehicle Detection (Intersection), demonstrated, furnished, installed and completely operational, as a single unit of work per intersection, acceptably completed.

If repairs or adjustments to restore vehicle detection to full function are not made the same day as notification, the associated pay item shall be reduced by the following amounts:

- First instance: No deduct if repaired within 24 hours.
- Each subsequent instance: 5% deduct for each day or partial day of non-compliance.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.11	Temporary Vehicle Detection (Butler-Hamilton-Johnson)	LS
SPV.0105.12	Temporary Vehicle Detection (Baldwin-Johnson)	LS

Payment is full compensation for demonstrating and selecting the vehicle detector technology, furnishing, installing and adjusting or moving the equipment, including all required materials, tools and supplies; for furnishing all labor; for clean-up and waste disposal; and for furnishing all incidentals necessary to complete the contract work.

131. Temporary Lighting, Item SPV.0105.13.

A Description

This special provision describes furnishing, installing, maintaining, and removing wood poles, guy wires, luminaires, arms and aerial cable to maintain 100% of the existing lighting system.

Work for temporary wood poles and guy wires shall be according to standard spec 661.

B Materials

Furnish aerial cable consisting of an assembly of three No. 4 XLP insulated power conductors with an ACSR messenger (grounding) wire. Provide the quantity of parallel cable assemblies necessary to maintain lighting circuits.

Furnish Type 4 wood poles, 35' long.

Protect any cable that extends from grade to 10 feet above grade by a plastic cable guard.

C Construction

Maintain existing, temporary and proposed lighting within the construction limits for the duration of the project. Maintenance includes but is not limited to replacement of burned out lamps, replacement of knocked down poles and maintaining continuous lighting.

The contractor shall keep streetlights in operation throughout the construction project until new lights are installed and operational as follows:

1. A minimum of two lights per intersection (except at the Butler-Hamilton-Johnson intersection where a minimum of four lights shall be required).
2. A minimum of one midblock lights, centrally located within the 300, 400, and 500 blocks of East Johnson Street, and a minimum of two midblock lights, centrally located within the remaining blocks (600 – 1200 blocks) of East Johnson Street. The distance between adjacent street lights shall be no greater than 250 feet, 300, 400, and 500 blocks of East Johnson Street lights in each midblock
3. If new streetlights are installed by the contractor to temporarily replace existing lights, each one shall be 250 watt HPS or equivalent lumen output, full cutoff.

Provide off-hours contact name(s) and phone number(s) for the city and police department for repair purposes and be able to respond within 2 hours to the project site for knockdowns or other work that must be completed in a timely manner. All other maintenance needs shall be completed within 24 hours of notification. It is also the contractor's responsibility to continuously monitor the existing and proposed lighting systems operation.

Coordinate work with the city's forces. Existing lighting contains 120 volt circuits. New lighting may need to be temporarily wired from existing circuits to maintain street lighting. Arrange for all required electrical service modifications with the utility. Pay all utility company installation costs for modifications required to maintain the Temporary Traffic Signal. The City of Madison will pay for energy costs.

D Measurement
The department will measure Temporary Lighting as a single lump sum unit of work, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.13	Temporary Lighting	LS

Payment is full compensation for furnishing, installing and removing wood poles, aerial cable, luminaires, arms, guy wires, maintaining lighting units, replacement of burned out lamps; replacement of knockdowns, and for furnishing and installing splice connectors.

132. Colored Crosswalk, Item SPV.0165.01.

A Description
This work consists of furnishing and applying a high friction surfacing system in accordance with this section and in conformity with the lines and details shown on the plans. The locations on the plans are noted as "Colored Cross Walk." The field installed system consists of a specially formulated two-component epoxy binder that is applied to the roadway surface and then covered with a durable aggregate to provide high friction resistance and the desired color. Colored Crosswalk will be red in color.

The manufacturer's technical representative shall come to the construction site to train department and contractor personnel prior to surface treatment and shall be available during application as necessary.

B Materials
General: Use a two part cold applied modified exothermic epoxy resin binder treatment containing epoxy binder capable of retaining an aggregate topping under vehicular traffic conditions.

Epoxy Binder: Use a 100% solids, two part, self leveling, epoxy binder consisting of a thermosetting modified epoxy compound, which holds the aggregate firmly in position. The epoxy binder shall meet the following requirements:

Property	Value	Test Method
Tensile Strength @ 7 days, psi, minimum	2000	ASTM D 638
Hardness, Shore D, minimum	70	ASTM D 2240
Compressive Strength, psi, minimum 1	600	ASTM D 695
Gel Time, minutes, minimum	10	ASTM D 2471
Cure Rate, hours, maximum	3	Film@ 75ºF
Water Absorption @ 24 hours, %, max.	0.25	ASTM D 570

Aggregate: The aggregate shall be high friction crushed bauxite, granite, or gravel. The aggregate will be delivered to the construction site in clearly labeled bags or sacks. The aggregate shall be clean, dry and free from foreign matter. The aggregate shall meet the following requirements:

Property	Value	Test Method
Aggregate Abrasion Value, maximum	20	LA Abrasion
Aggregate Grading,		
No 6 Sieve Size, minimum passing, %	95	
No 16 Sieve Size, maximum passing, %	5	
Aggregate Color	Red	

Two part epoxy materials, which are not exothermic in curing and do not meet the viscosity requirements, will not be allowed. The contractor shall provide an independent laboratory report which documents that the epoxy binder meets the requirements of this section.

Certification: Finished surface shall have a minimum 60 FN40R in accordance with ASTM E274, of aggregate bonded to a vehicular bearing surface using the modified epoxy binder.

C Construction

General: Do not apply the two part modified epoxy binder on a wet surface, when the ambient and/or surface temperature is below 45^{o}F or above 100^{o}F, or when the anticipated weather conditions would prevent the proper application of the surface treatment, as determined by the manufacturer's representative and the Engineer. All components shall have a temperature greater than 45^{o}F immediately before mixing and placement.

Preparation: Prepare surfaces so that they are clean, dry, and free of all dust, oil, debris and any other material that might interfere with the bond between the epoxy binder material and existing surfaces. The manufacturer's representative will determine if all surfaces have been adequately cleaned.

Protect utilities, drainage structures, curbs and any other structure within or adjacent to the treatment location against the application of the surface treatment materials. Cover and protect all existing pavement markings that are adjacent to the application surfaces as

directed by the Engineer. Remove by grinding any pavement markings that conflict with the surface application and thoroughly sweep or vacuum the surface clean prior to the epoxy binder application.

Pre-treat joints and cracks greater than 1/4 inches in width and depth with the mixed epoxy specified herein or by using an alternative procedure proposed by the manufacturer and agreed upon by the Engineer. Proceed with the epoxy binder and aggregate topping installation once the epoxy, in the pre-treated areas, has gelled or once the alternative procedure has been accomplished.

For applications on new pavements, install the high friction epoxy binder and aggregate topping a minimum of 20 days after the placement of the underlying and adjacent pavement.

Mixing and Application of Epoxy Binder and Aggregate Wearing Course: Utilize one of the following methods for the application of the epoxy binder and aggregate wearing course, as applicable.

(1) **Hand mixing and application**: Proportion the two-part modified epoxy base binder components, Part A and Part B, to the correct ratio, as recommended by the manufacturer, and mix using a low speed, high torque drill fitted with a helical stirrer. Hand-apply the mixed components onto a prepared pavement surface at a thickness of the mixed epoxy shall be 50 to 100 mils. Uniformly spread hand-applied base binder onto the substrate surface by means of a serrated edge squeegee. Immediately, spread the high friction surfacing aggregate onto the two part modified epoxy base binder.

(2) **Mechanical mixing and application**: Apply the two part modified epoxy base binder by a truck mounted application machine onto the pavement section to be treated in varying widths at a uniform application thickness. Proceed with operations in such a manner that will not allow the epoxy base binder material to separate in the mixing lines, cure, dry, or otherwise impair retention bonding of the high friction surfacing aggregate. Apply the mixed components mechanically onto the prepared pavement surface with a uniform thickness of 50 to 100 mils. Immediately, mechanically apply the high friction surfacing aggregate in a uniform, continuous manner.

For either of the above methods, do not use vibratory or impact type compaction on the aggregate after placement. Use only lightweight rollers to seat the aggregate topping without crushing the aggregate. Complete coverage of the “wet” epoxy binder with aggregate is necessary to achieve a uniform surface. No exposed wet spots shall be visible once the aggregate is placed.

Curing: Allow the high friction aggregate topped epoxy binder to cure in accordance with manufacturer recommendations. Protect treated surfaces from traffic and environmental effects until the area has cured.

Removal of Excess Aggregate: Remove the excess aggregate by hand brooms, mechanical sweeping, or vacuum sweeping before opening to traffic. Excess aggregate can be reused on the following day's installation, provided the aggregate is clean, uncontaminated, and dry.

The engineer may require additional mechanical or vacuum sweeping as necessary after the system fully cures and the treated surface is open to traffic.

D Measurement

The department will measure Crosswalk Special by the square yard acceptably completed. No deduction will be made for the areas occupied by manholes, inlets, drainage structures, pavement markings or by any public utility appurtenances within the area.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM	DESCRIPTION	UNIT
SPV.0165.01	Colored Crosswalk	SF

Payment is full compensation for furnishing and installing all materials.

133. Colored Bike Box, Item SPV.0165.02.

A Description

This work consists of furnishing and applying a high friction surfacing system in accordance with this Section and in conformity with the lines and details shown on the plans. The locations on the plans are noted as "Colored Bike Box." The field installed system consists of a specially formulated two-component epoxy binder that is applied to the roadway surface and then covered with a durable aggregate to provide high friction resistance and the desired color. Colored Bike Box will be green in color.

The manufacturer's technical representative shall come to the construction site to train Department and Contractor personnel prior to surface treatment and shall be available during application as necessary.

B Materials

General: Use a two part cold applied modified exothermic epoxy resin binder treatment containing epoxy binder capable of retaining an aggregate topping under vehicular traffic conditions.

Epoxy Binder: Use a 100% solids, two part, self leveling, epoxy binder consisting of a thermosetting modified epoxy compound, which holds the aggregate firmly in position. The epoxy binder shall meet the following requirements:

Property	Value	Test Method
Tensile Strength @ 7 days, psi, minimum	2000	ASTM D 638
Hardness, Shore D, minimum	70	ASTM D 2240
Compressive Strength, psi, minimum 1	600	ASTM D 695
Gel Time, minutes, minimum	10	ASTM D 2471
Cure Rate, hours, maximum	3	Film@ 75ºF
Water Absorption @ 24 hours, %, max.	0.25	ASTM D 570

Aggregate: The aggregate shall be high friction crushed Bauxite, Granite, or gravel. The aggregate will be delivered to the construction site in clearly labeled bags or sacks. The aggregate shall be clean, dry and free from foreign matter. The aggregate shall meet the following requirements:

Property	Value	Test Method
Aggregate Abrasion Value, maximum	20	LA Abrasion
Aggregate Grading,		
No 6 Sieve Size, minimum passing, %	95	
No 16 Sieve Size, maximum passing, %	5	
Aggregate Color	Green	

Two part epoxy materials, which are not exothermic in curing and do not meet the viscosity requirements, will not be allowed. The Contractor shall provide an independent laboratory report which documents that the epoxy binder meets the requirements of this section.

Certification: Finished surface shall have a minimum 60 FN40R in accordance with ASTM E274) of aggregate bonded to a vehicular bearing surface using the modified epoxy binder.

C Construction

General: Do not apply the two part modified epoxy binder on a wet surface, when the ambient and/or surface temperature is below 45^{o}F or above 100^{o}F, or when the anticipated weather conditions would prevent the proper application of the surface treatment, as determined by the manufacturer's representative and the Engineer. All components shall have a temperature greater than 45^{o}F immediately before mixing and placement.

Preparation: Prepare surfaces so that they are clean, dry, and free of all dust, oil, debris and any other material that might interfere with the bond between the epoxy binder material and existing surfaces. The manufacturer's representative will determine if all surfaces have been adequately cleaned.

Protect utilities, drainage structures, curbs and any other structure within or adjacent to the treatment location against the application of the surface treatment materials. Cover and protect all existing pavement markings that are adjacent to the application surfaces as

directed by the Engineer. Remove by grinding any pavement markings that conflict with the surface application and thoroughly sweep or vacuum the surface clean prior to the epoxy binder application.

Pre-treat joints and cracks greater than 1/4 inches in width and depth with the mixed epoxy specified herein or by using an alternative procedure proposed by the manufacturer and agreed upon by the Engineer. Proceed with the epoxy binder and aggregate topping installation once the epoxy, in the pre-treated areas, has gelled or once the alternative procedure has been accomplished.

For applications on new pavements, install the high friction epoxy binder and aggregate topping a minimum of 20 days after the placement of the underlying and adjacent pavement.

Mixing and Application of Epoxy Binder and Aggregate Wearing Course: Utilize one of the following methods for the application of the epoxy binder and aggregate wearing course, as applicable.

(1) **Hand mixing and application**: Proportion the two-part modified epoxy base binder components, Part A and Part B, to the correct ratio, as recommended by the manufacturer, and mix using a low speed, high torque drill fitted with a helical stirrer. Hand-apply the mixed components onto a prepared pavement surface at a thickness of the mixed epoxy shall be 50 to 100 mils. Uniformly spread hand-applied base binder onto the substrate surface by means of a serrated edge squeegee. Immediately, spread the high friction surfacing aggregate onto the two part modified epoxy base binder.

(2) **Mechanical mixing and application**: Apply the two part modified epoxy base binder by a truck mounted application machine onto the pavement section to be treated in varying widths at a uniform application thickness. Proceed with operations in such a manner that will not allow the epoxy base binder material to separate in the mixing lines, cure, dry, or otherwise impair retention bonding of the high friction surfacing aggregate. Apply the mixed components mechanically onto the prepared pavement surface with a uniform thickness of 50 to 100 mils. Immediately, mechanically apply the high friction surfacing aggregate in a uniform, continuous manner.

For either of the above methods, do not use vibratory or impact type compaction on the aggregate after placement. Use only lightweight rollers to seat the aggregate topping without crushing the aggregate. Complete coverage of the “wet” epoxy binder with aggregate is necessary to achieve a uniform surface. No exposed wet spots shall be visible once the aggregate is placed.

Curing: Allow the high friction aggregate topped epoxy binder to cure in accordance with manufacturer recommendations. Protect treated surfaces from traffic and environmental effects until the area has cured.

Removal of Excess Aggregate: Remove the excess aggregate by hand brooms, mechanical sweeping, or vacuum sweeping before opening to traffic. Excess aggregate can be reused on the following day's installation, provided the aggregate is clean, uncontaminated, and dry.

The engineer may require additional mechanical or vacuum sweeping as necessary after the system fully cures and the treated surface is open to traffic.

D Measurement
The department will measure Crosswalk Special by the square yard, acceptably completed. No deduction will be made for the areas occupied by manholes, inlets, drainage structures, pavement markings or by any public utility appurtenances within the area.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.02	Colored Bike Box	SF

Payment is full compensation for furnishing and installing all materials.

134. Architectural Concrete Pavement 5-Inch, Item SPV.0180.01.

A Description
This work consists of furnishing and installing colored and imprinted concrete, complete and accepted in place, including base materials, sealer and samples in accordance to standard spec 602, the plans, details, and as provided herein.

B Materials
At least 15 working days prior to the start of colored and imprinted concrete installation, supply one 4-foot x 4-foot panel sample of the colored imprinted concrete. The final color and stamp pattern is to be approved by the engineer prior to placement of any colored imprinted concrete in the field.

The sample shall become the property of the City of Madison upon completion of this project.

The concrete shall be grade A2 or grade A-FA as specified in standard spec 501.3.2.2. All colored concrete shall originate from the same batch plant.

B.1 Water Evaporative Reducer (Con Film):
A water evaporative reducer shall be used to hold in the bleed water for dry shake color hardener application. The water evaporative reducer shall be Dayton Superior Sure Film (J-74) or equal as approved by the engineer. It is recommended that the contractor

confirm the type of water evaporative reducer to be used with the manufacturer of color hardener.

B.2 Dry Shake Color Hardener:
Use a dry shake color hardener with a color similar to Brickform Rafco Products color #425, Autumn Brown.

B.3 Release Agent:
Use a powder release agent with a color similar to Brickform Rafco Products color #300, Nutmeg.

B.4 Curing Compound:
The curing compound shall meet the specifications of ASTM C 1315 Type I Class A (TK Products AK-2 Achro Kure 1315 or equal) clear non-yellowing curing compound.

B.5 Imprinting Pattern:
6”x6” cobble stone pattern applied parallel to roadway centerline.

C Construction
Architectural Concrete Pavement, 5-Inch, shall be installed by an experienced contractor who has installed a minimum of 30,000 square feet of colored and imprinted concrete. Submit written documentation of imprinted concrete work to the engineer prior to the start of construction.

Apply water evaporative reducer per manufacturer’s recommendations. Protect all adjoining areas of concrete. Finish concrete and apply dry shake color hardener per manufacturer’s recommendations. Color hardener shall be hand-broadcasted uniformly across the concrete in two separate broadcasting operations (shakes). Two-thirds of the material shall be applied in the first shake with one-third being withheld for the second shake and final touch-up as necessary. Applications shall be made at 90 degrees to each other. The necessary moisture for wetting the color hardener must come from the concrete substrate. Adding water to the concrete surface to work in the dry shake color hardener is not permitted.

Apply release agent per manufacturer’s recommendations.

Stamping method shall be per manufacturer’s specified methods. Check all depths of imprints by tool to tool surface leveling.

Tooling is to be completed as stamping tools are removed following imprinting. Eliminate all squeeze joints between stamping tools, if any, with hand tools prior to concrete setting.

Remove excess release agent from the concrete 72 hours after placement using a stiff brush and a mild muratic acid solution (approximately 4 oz per 2.5 gallons water) to achieve desired color. Rinse and let dry. Apply curing compound at 350 Sq. Ft/Gal

coverage rate or per manufacturer's recommendations to seal the concrete immediately after drying.

Joint the concrete in accordance to standard spec 602.3.2.5 amended as follows: Delete paragraph (10). Joints shall be sawed such that the saw joint follows the concrete pattern recess.

Architectural concrete pavement shall match the visual appearance of the approved referee sample. Architectural concrete pavement not conforming to the referee sample shall be replaced at the contractor's expense.

D Measurement
The department will measure Architectural Concrete Pavement, 5-Inch, by the square yard, acceptably completed.

E Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Architectural Concrete Pavement, 5-Inch	SY

Payment is full compensation for installation of concrete and furnishing all labor, tools, equipment, and incidentals, including base materials, necessary to complete the work.

135. Construct Outside Drop, 8", Item SPV.0200.01; Construct Outside Drop, 10" Item SPV.0200.02.

A Description
This special provision describes constructing outside drop structures on sanitary sewer access structures where shown in the drawings, or as directed by the City of Madison. Outside Drops are required if the elevation difference between the flow line of the incoming pipe and the springline of the outgoing pipe is greater than two feet.

B Materials
Provide all materials associated with this item in accordance with Standard Detail Drawing 5.7.2 and Article 507.3(d)1 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C Construction
Construct Outside Drop in accordance to Article 507.3(d)1 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Maintain the normal flow of wastewater at all times during installation of the sanitary sewer access structure, construction of the outside drop structure, and when connecting new and existing pipes to the structure.

Complete any necessary temporary wastewater control in accordance to the City of Madison Standard Specifications for Public Works Construction - Latest Edition, and as described under bid item Wastewater Control item.

D Measurement

The department will be measure Construct Outside Drop by the vertical foot, acceptably completed, measured from the invert of the entree Tee to the springline of the outgoing sewer in accordance to City of Madison Standard Detail Drawing 5.7.2 (Detail A).

E Payment

The department will pay for measured quantities at the contract price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0200.01	Construct Outside Drop, 8-Inch	VF
SPV.0200.02	Construct Outside Drop, 10-Inch	VF

Payment is full compensation for excavating, backfilling and disposing of surplus materials; and for making connections; and for furnishing all materials.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including "pipeline" activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor's needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of $5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

   Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __2__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __1__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:

   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

   http://www.dot.wisconsin.gov/business/engrserv/dbe-main.htm

2. Definitions

a. Interpret these terms, used throughout this additional special provision, as follows:

   i. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
   ii. **DBE:** A disadvantaged business enterprise (DBE) certified as a DBE by the department and included on the department's list of certified DBE's who are determined to be ready, willing and able.
   iii. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
   iv. **Discretionary Goal:** A contractor assigned DBE goal, typically abbreviated as “Disc” on the cover of the Highway Work Proposal, which is enforced as committed.
   v. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.
   vi. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.
   vii. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal, including projects with discretionary goals. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually commits to DBE participation at or above the bid percentage, or certifies that they have utilized

comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. Department's DBE Evaluation Process

a. Documentation Submittal

Within 10 business days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506] and all necessary attachment A forms, as well as, Good Faith Waiver Form [DT1202] and supporting documentation as necessary. If the contractor fails to furnish the required forms within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

i. Bidder Meets DBE Goal

If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage achieved. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

ii. Bidder Does Not Meet DBE Goal

(1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.

(2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:

a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.

b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

The Code of Federal Regulations {CFR}, 49 CFR Part 26-Appendix A, is the guiding regulation concerning good faith efforts. However, the federal regulations do not define “good faith” but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own process when making a determination of good faith.

a. The department will only grant a good faith waiver if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith waiver will be granted. The bidder must demonstrate, on the DT1202 that they have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

c. Prime Contractors should:
   i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

   ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, ***as required by federal rules***. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

      (1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.

      (2) SBN is the preferred outreach tool. https://www.bidx.com/wi/main. Other acceptable means include postal mail, email, fax, phone call.

         a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

         b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.

      (3) Second solicitation should take place within 5 days
         a. An email solicitation is highly recommended for this second solicitation

      (4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

      (5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.

      (6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:
         a. Email to all prospective DBE firms in relevant work areas
         b. Phone call log to DBE firms who express interest via written response or call.
         c. Fax/letter confirmation
         d. Copy of the DBE quotes
         e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.
   i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its

capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.

ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

(1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.

(2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

e. After notification of contract award, submit **'Commitment to Subcontract'** form within the time period specified in the contract.

i. Provide the following information along with department form DT1202:

(1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.

(2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.

(3) Photocopies or electronic copies of all written solicitations to DBE's.

(4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.

(5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

DBE Support Services Office
6150 Fond du Lac Ave.
Milwaukee, WI 53218
Phone: 414-438-4583 / 608-266-6961
Fax: 414-438-5392
E-mail: DOTDBESupportServices@dot.wi.gov

6. Bidder's Appeal Process

a. A bidder can appeal the department's decision to deny the bidder's good faith waiver request. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so

requested. Failure to appeal within 7 calendar days after receiving the department's written notice of rejection of a good faith waiver request under constitutes a forfeiture of the bidder's right of appeal. If the bidder does not appeal, the department may declare the bid ineligible for execution.

b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 7 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

7. Department's Criteria for DBE Participation

Department's DBE List

a. The department maintains a DBE list on the department's website at

http://app.mylcm.com/wisdot/Reports/WisDotUCPDirectory.aspx

b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor’s responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

b. A DBE is performing a commercially useful function if the following conditions are met:

c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.

d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at

http://www.dot.wisconsin.gov/business/engrserv/docs/dbe-trucking-notice.pdf

11. Manufacturers and Suppliers

The department counts material and supplies a DBE provides under the contract. The department will give full credit toward the DBE goal if the DBE is a manufacturer of those materials or supplies. The department will give 60 percent credit toward the DBE goal if the DBE is merely a supplier of those materials or supplies. It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

12. DBE Prime

If the prime contractor is a DBE, the department will only count the work the contractor performs with its own forces, the work DBE subcontractors perform, and the work DBE suppliers or manufacturers perform.

13. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces.

14. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm

b. On every other project that the mentor protégé team identifies itself on.

c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

In the event a Prime Contractor needs to replace a DBE firm originally listed on the approved DBE Commitment Form DT1506, the Prime Contractor must comply with the department's DBE Replacement Policy located on the DBE page on the following web site:

http://www.dot.wisconsin.gov/business/engrserv/docs/policyreplacingdbe.pdf

16. Changes to the approved DBE Commitment Form DT1506

If there are any changes to the approved Commitment to Subcontract to DBE Form DT1506, the prime contractor must submit a revised DBE Commitment Form DT1506 and relevant attachment A(s) to the DBE Programs Office within 5 business days.

17. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors, that were committed to equal work items, in the original contract.

18. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS

FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR

SUBJECT: **REQUEST FOR DBE QUOTES**

LET DATE & TIME

DATE: MONTH DAY YEAR

CC: DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at http://roadwaystandards.dot.wi.gov/hcci/

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternative's are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at http://roadwaystandards.dot.wi.gov/hcci/

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have some one contact me at this number

Prime Contractor 's Contact Person		DBE Contractor Contact Person	
Phone:		Phone	
Fax:		Fax	
Email:		Email	

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternative's are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
    d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
    c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
    c. Add attachments to a sub-quote
    d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISION 6

ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2014 edition of the standard specifications:

101.3 Definitions

Replace the definition of semi-final estimate with the following effective with the December 2013 letting:

Semi-final estimate An estimate indicating the engineer has measured and reported all contract quantities and materials requirements.

105.11.1 Partial Acceptance

Replace paragraph two with the following effective with the December 2013 letting:

(2) Partial acceptance will relieve the contractor of maintenance responsibility for the designated portion of the work. By relieving the contractor of maintenance, the department does not relieve the contractor of responsibility for defective work or damages caused by the contractor's operations. Do not construe partial acceptance to be conditional final acceptance or final acceptance of any part of the project, or a waiver of any legal rights specified under 107.16.

105.11.2 Final Acceptance

Retitle and replace the entire text with the following effective with the December 2013 letting:

105.11.2 Project Acceptance

105.11.2.1 Inspection

105.11.2.1.1 General

(1) Notify the engineer when the project is substantially complete as defined in 105.11.2.1.3. As soon as it is practical, the engineer will inspect the work and categorize it as one of the following:

1. Unacceptable or not complete.
2. Substantially complete.
3. Complete.

105.11.2.1.2 Unacceptable or Not Complete

(1) The engineer will identify, in writing, work that is unacceptable or not complete. Immediately correct or complete that work. The engineer will assess contract time until the work is corrected or completed.

(2) Proceed as specified in 105.11.2.1.1 until the engineer determines that the work is complete.

105.11.2.1.3 Substantially Complete

(1) The project is substantially complete and the engineer will no longer assess contract time if the contractor has completed all contract bid items and change order work, except for the punch-list. As applicable, the following must have occurred:

1. All lanes of traffic are open on a finished surface.
2. All signage and traffic control devices are in place and operating.
3. All drainage, erosion control, excavation, and embankments are completed.
4. All safety appurtenances are completed.

(2) The engineer will provide a written punch-list enumerating work the contractor must perform and documents the contractor must submit before the the engineer will categorize the work as complete.

1. Punch-list work includes uncompleted cleanup work required under 104.9 and minor corrective work. Immediately correct or complete the punch-list work. The engineer may restart contract time if the contractor does not complete the punch-list work within 5 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 5-day requirement.
2. Punch-list documents include whatever contract required documentation is missing. The engineer may restart contract time if the contractor does not submit the punch-list documents within 15 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 15-day requirement.

(3) Proceed as specified in 105.11.2.1.1 until the work is complete.

105.11.2.1.4 Complete

(1) The project is complete when the contractor has completed all contract bid items, change order work, and punch-list work including the submission of all missing documentation.

105.11.2.2 Conditional Final Acceptance

(1) When the engineer determines that the project is complete, the engineer will give the contractor written notice of conditional final acceptance relieving the contractor of maintenance responsibility for the completed work.

105.11.2.3 Final Acceptance

(1) The engineer will grant final acceptance of the project after determining that all contract is work complete; all contract, materials, and payroll records are reviewed and approved; and the semi-final estimate quantities are final under 109.7.

(2) Failure to discover defective work or materials before final acceptance does not prevent the department from rejecting that work or those materials later. The department may revoke final acceptance if the department discovers defective work or materials after it has accepted the work.

105.13.3 Submission of Claim

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim, but not later than final acceptance of the project as specified in 105.11.2.3. If the contractor does not submit the claim before final acceptance of the project, the department will deny the claim.

107.17.3 Railroad Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the engineer determines that the work is complete as specified in 105.11.2.1.4.

107.26 Standard Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) Maintain the following types and limits of commercial insurance in force until the engineer determines that the work is complete as specified in 105.11.2.1.4.

TABLE 107-1 REQUIRED INSURANCE AND MINIMUM COVERAGES

TYPE OF INSURANCE	MINIMUM LIMITS REQUIRED[1]
1. Commercial general liability insurance endorsed to include blanket contractual liability coverage.[2]	$2 million combined single limits per occurrence with an annual aggregate limit of not less than $4 million.
2. Workers' compensation.	Statutory limits
3. Employers' liability insurance.	Bodily injury by accident: $100,000 each accident Bodily injury by disease: $500,000 each accident $100,000 each employee
4. Commercial automobile liability insurance covering all contractor-owned, non-owned, and hired vehicles used in carrying out the contract.[2]	$1 million-combined single limits per occurrence.

[1] The contractor may satisfy these requirements with primary insurance coverage or with excess/umbrella policies.

[2] The Wisconsin Department of Transportation, its officers, agents, and employees shall be named as an additional insured under the general liability and automobile liability insurance.

108.14 Terminating the Contractor's Responsibility

Replace paragraph one with the following effective with the December 2013 letting:

(1) The contractor's responsibilities are terminated, except as set forth in the contract bond and specified in 107.16, when the department grants final acceptance as specified in 105.11.2.3.

109.2 Scope of Payment

Replace paragraph two with the following effective with the December 2013 letting:

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the applicable bid items including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
    - The nature of the work.
    - The action of the elements.
    - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

109.6.1 General

Replace paragraphs three and four with the following effective with the December 2013 letting:

(3) The department’s payment of an estimate before conditional final acceptance of the work does not constitute the department’s acceptance of the work, and does not relieve the contractor of responsibility for:

1. Protecting, repairing, correcting, or renewing the work.
2. Replacing all defects in the construction or in the materials used in the construction of the work under the contract, or responsibility for damage attributable to these defects.

(4) The contractor is responsible for all defects or damage that the engineer may discover on or before the engineer’s conditional final acceptance of the work. The engineer is the sole judge of these defects or damage, and the contractor is liable to the department for not correcting all defects or damage.

109.7 Acceptance and Final Payment

Replace paragraphs one and two with the following effective with the December 2013 letting:

(1) After the engineer grants conditional final acceptance of the work as specified in 105.11.2.2 and reviews required document submittals and materials test reports, the engineer will issue the semi-final estimate.

(2) Within 30 calendar days after receiving the semi-final estimate, submit to the engineer a written statement of agreement or disagreement with the semi-final estimate. For an acceptable statement of disagreement, submit an item-by-item list with reasons for each disagreement. If the contractor does not submit this written statement within those 30 days, the engineer will process the final estimate for payment. The engineer and the contractor can mutually agree to extend this 30-day submission requirement.

450.3.3 Maintaining the Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the prepared foundation, tack coat, base, paved traffic lanes, shoulders, and seal coat. Correct all rich or bleeding areas, breaks, raveled spots, or other nonconforming areas in the paved surface.

455.3.2.5 Maintaining Tack Coat

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the existing surface and the tack coat. Correct areas with excess or deficient tack material and any breaks, raveled spots, or other areas where bond might be affected.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the January 2014 letting:

(1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for E-3 mixes.

[2] 15.5 for E-3 mixes.

460.2.7 HMA Mixture Design

Replace paragraph one with the following effective with the January 2014 letting:

(1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to the department's test method number 1559 as described in CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to the department's test method number 1559.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10^6 (20 yr design life)	< 0.3	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	___
LA Wear (AASHTO T96)							
100 revolutions(max % loss)	13	13	13	13	13	13	13
500 revolutions(max % loss)	50	50	45	45	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	40	45	45	50	50
Gyratory Compaction							
Gyrations for N_{ini}	6	7	7	8	8	9	8
Gyrations for N_{des}	40	60	75	100	100	125	65
Gyrations for N_{max}	60	75	115	160	160	205	160
Air Voids, $\%V_a$ ($\%G_{mm}$ N_{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G_{mm} N_{ini}	<= 91.5[1]	<= 90.5[1]	<= 89.0[1]	<= 89.0	<= 89.0	<= 89.0	___
% G_{mm} N_{max}	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/P_{be})	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 - 78[4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)							
no antistripping additive	0.70	0.70	0.70	0.70	0.70	0.70	0.70
with antistripping additive	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Draindown at Production Temperature (%)	___	___	___	___	___	___	0.30

[1] The percent maximum density at initial compaction is only a guideline.

[2] For a gradation that passes below the boundaries of the caution zone(ref. AASHTO MP3), the dust to binder ratio limits are 0.6 - 1.6.

[3] For 9.5mm and 12.5 mm nominal maximum size mixtures, the specified VFB range is 70 - 76%.

[4] For 37.5mm nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For 25.0mm nominal maximum size mixes, the specified VFB lower limit is 67%.

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the January 2014 letting:

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+/- 1.3	+/- 1.0
VMA in percent[1]	- 0.5	- 0.2

[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in Table 460-1.

(2) Warning bands are defined as the area between the JMF limits and the warning limits.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace the entire text with the following effective with the January 2014 letting:

(1) The contractor may request adjustment of the JMF according to the department's test method number 1559. Have an HTCP HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have an HMA technician certified at level III review the proposed adjustment and, if acceptable, issue a revised JMF.

(2) The department will not allow adjustments that do the following:

- Exceed specified JMF tolerance limits.
- Reduce the JMF asphalt content unless the production VMA running average meets or exceeds the minimum VMA design requirement defined in table 460-1for the mixture produced.

(3) Have an HMA technician certified at level II make related process adjustments. If mixture redesign is necessary, submit a new JMF, subject to the same specification requirements as the original JMF.

520.3.8 Protection After Laying

Delete the entire subsection.

614.2.1 General

Replace paragraphs five and six with the following effective with the December 2013 letting:

(5) Furnish zinc coated wire rope and fitting conforming to the plans and galvanized according to ASTM A741.

(6) Before installation store galvanized components above ground level and away from surface run off. The department may reject material if the zinc coating is physically damaged or oxidized.

(7) Provide manufacturer's drawings, and installation and maintenance instructions when providing proprietary systems.

614.2.3 Steel Rail and Fittings

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish galvanized steel rail conforming to AASHTO M180 class A, type II beam using the single-spot test coating requirements. Furnish plates, anchor plates, post mounting brackets, and other structural steel components conforming to 506.2.2.1 and hot-dip galvanized according to ASTM A123.

614.2.7 Crash Cushions

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish permanent and temporary crash cushions from the department's approved products list. Use cushions as wide or wider than the plan back-width. Furnish transitions conforming to the crash cushion manufacturer's design and specifications. Submit manufacturer crash cushion and transition design details to engineer before installing.

616.3.1 General

Replace paragraph six with the following effective with the December 2013 letting:

(6) Remove and dispose of all excess excavation and surplus materials from the fence site.

618.3.3 Restoration

Replace paragraph one with the following effective with the December 2013 letting:

(1) Upon termination of hauling operations and before conditional final acceptance, restore all haul roads, including drainage facilities and other components, to the equivalent of pre-hauling conditions.

627.3.1 General

Replace paragraph four with the following effective with the December 2013 letting:

(4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes.

637.3.2.1 General

Delete paragraph three effective with the December 2013 letting.

670.3.4.2 Post-Construction Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit 5 copies of ITS documentation including but not limited to the following:

- Operator's manual: for contractor furnished equipment, submit a manual containing detailed operating instructions for each different type or model of equipment and or operation performed.
- Maintenance procedures manuals: for contractor furnished equipment, submit a manual containing detailed preventive and corrective maintenance procedures for each type or model of equipment furnished.
- Cabinet fiber optic wiring diagram: submit a cabinet wiring diagram, identified by location for each cabinet. Include both electrical wiring and fiber optic conductor and cable connections. Place one copy of the fiber optic wiring diagram in a weatherproof holder in the cabinet. Deliver the other copies to the engineer.
- As-built drawings: submit final as-built drawings that detail the final placement of all conduit, cabling, equipment, and geometric modifications within the contract. Provide all documentation in an electronic format adhering to the region’s ITS computer aided drafting standards and according to the department’s as-built requirements. The department will review the as-built drawings for content and electronic format. Modify both the content and format of as-built drawings until meeting all requirements.
- Equipment inventory list: submit an inventory list including serial number, make, model, date installed, and location installed of all equipment installed under the contract.

Errata

Make the following corrections to the 2014 edition of the standard specifications:

415.3.14 Protecting Concrete

Correct errata by referencing the opening to service specification.

(1) Erect and maintain suitable barricades and, if necessary, provide personnel to keep traffic off the newly constructed pavement until it is opened for service as specified in 415.3.15. Conform to 104.6 for methods of handling and facilitating traffic.

501.2.9 Concrete Curing Materials

Correct errata by changing AASHTO M171 to ASTM C171.

(2) Furnish sheeting conforming to ASTM C171 for white opaque polyethylene film, except that the contractor may use clear or black polyethylene for cold weather protection.

607.2 Materials

Correct errata by changing AASHTO M198 to ASTM C990.

(1) Use materials conforming to the requirements for the class of material named and specified below.

Composite pipe, couplings, fittings and joint materials	ASTM D2680
Annular rubber and plastic gaskets for flexible, watertight joints	ASTM C990
External rubber gaskets, mastic, and protective film	ASTM C877
Mortar	519.2.3

637.2.1.3 Sheet Aluminum

Correct errata by changing ASTM B449 to B921 and eliminating the specification for coating thickness.

(4) Degrease, etch, and coat the sign blank on both sides with a chromate treatment conforming to ASTM B921, class 2.

637.3.3.4 Performance

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(1) Under 105.11.2.3 the department may revoke acceptance and direct the contractor to repair or replace previously accepted sign installations if the department subsequently discovers evidence of defective materials or improper installation. Deficiencies that warrant department action include but are not limited to the following:

- Sign posts more than five degrees out of plumb.
- Signs twisted by more than 5 degrees from plan orientation.
- Signs with delaminated or warped plywood.
- Signs with bubbling, fading, delaminating, or buckling sheeting.

646.3.3.4 Proving Period

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(4) Replace all marking within sections with a percent failing more than 10% and repair or replace all markings that, in the engineer's assessment, show evidence of improper construction. If post-acceptance inspections uncover evidence of defective materials or improper construction, the department may revoke acceptance under 105.11.2.3.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.

B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

DECEMBER 2013

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

http://roadwaystandards.dot.wi.gov/standards/forms/ws4567.doc

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. Wage Rates, Hours of labor and payment of Wages
II. Payroll Requirements
III. Postings at the Site of the Work
IV. Affidavits
V. Wage Rate Redistribution
VI. Additional Classifications

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
DANE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on September 1, 2013

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	35.58	19.20	54.78
Carpenter	30.16	15.31	45.47
Cement Finisher	32.09	16.13	48.22
Future Increase(s): Add $1.87 on 6/1/13; Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; Add $1.75 on 6/1/16. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	32.94	18.80	51.74
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	28.00	4.50	32.50
Ironworker	30.90	19.11	50.01
Line Constructor (Electrical)	31.29	15.34	46.63
Painter	26.65	13.10	39.75
Pavement Marking Operator	29.22	16.71	45.93
Piledriver	30.66	15.31	45.97
Roofer or Waterproofer	30.40	2.23	32.63
Teledata Technician or Installer	21.26	11.75	33.01
Tuckpointer, Caulker or Cleaner	32.01	16.85	48.86
Underwater Diver (Except on Great Lakes)	37.45	19.45	56.90
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	29.64	17.00	46.64
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	15.09	50.59
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.94	13.57	39.51
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.08	12.96	37.04

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.90	33.65
TRUCK DRIVERS			
Single Axle or Two Axle	33.22	18.90	52.12
Three or More Axle	23.31	17.13	40.44
Future Increase(s): Add $1.85/hr on 6/1/2013. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	27.77	19.90	47.67
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Pavement Marking Vehicle	23.84	14.94	38.78
Shadow or Pilot Vehicle	33.22	18.90	52.12
Truck Mechanic	22.50	16.19	38.69
LABORERS			
General Laborer	28.35	13.90	42.25
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	18.00	0.00	18.00
Landscaper	28.35	13.90	42.25
Future Increase(s): Add $1.70/hr on 6/1/13; Add $1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	24.70	13.90	38.60
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.81	12.22	30.03
Railroad Track Laborer	23.41	6.91	30.32

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	35.22	19.90	55.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	34.72	19.90	54.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.	34.22	19.90	54.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine.	33.96	19.90	53.86
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.	33.67	19.90	53.57
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Fiber Optic Cable Equipment.	25.74	15.85	41.59

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI140010
DATE: February 7, 2014
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	$29.32	14.53
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	29.42	14.53
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	29.47	14.53
Group 4: Line and Grade Specialist	29.67	14.53
Group 5: Blaster and Powderman	29.52	14.53
Group 6: Flagperson and Traffic Control Person	25.67	14.53

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	23.82	18.32
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	23.97	18.32

CLASSES OF LABORER AND MECHANICS

Bricklayer	28.41	12.81
Carpenter	30.48	15.80
Millwright	32.11	15.80
Piledriverman	30.98	15.80
Ironworker	31.50	20.03
Cement Mason/Concrete Finisher	32.09	16.13
Electrician		See Page 3
Line Construction		
Lineman	39.50	32% + 5.00
Heavy Equipment Operator	37.53	32% + 5.00
Equipment Operator	31.60	32% + 5.00
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	21.73	32% + 5.00
Painter, Brush	24.50	16.27
Painter, Spray, Structural Steel,Bridges	25.50	16.27
Well Drilling:		
Well Driller	16.52	3.70

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0, dated January 3, 2014; Modification #1, dated February 7, 2014.

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI140010
DATE: February 7, 2014
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	$36.72	$20.10
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer.	$36.22	$20.10
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor		

POWER EQUIPMENT OPERATORS CLASSIFICATION: (Continued)	Basic Hourly Rates	Fringe Benefits
(scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	$35.72	$20.10
Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner.	$35.46	$20.10
Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.	$35.17	$20.10
Group 6: Off – road material hauler with or without ejector	$29.27	$20.10

Premium Pay:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hours

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI140010
DATE: February 7, 2014
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$28.40	16.676
Area 2:		
Electricians	29.13	17.92
Area 3:		
Electrical contracts under $130,000	26.24	16.85
Electrical contracts over $130,000	29.41	16.97
Area 4:	28.50	28.75% + 9.27
Area 5	28.96	24.85% + 9.70
Area 6	35.25	19.30
Area 8		
Electricians	30.60	24.95% + 10.33
Area 9:		
Electricians	32.94	18.71
Area 10	28.97	19.55
Area 11	31.91	23.60
Area 12	32.87	19.23
Area 13	32.82	22.51
Teledata System Installer		
Area 14		
Installer/Technician	21.89	11.83
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	24.75	16.04

Area 1 - CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.

Area 2 - ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

Area 4 - BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES

Area 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

Area 9 - COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES

Area 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

Area 15 - DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.

FEBRUARY 1999

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omision of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

CONTRACT: 20140408007

PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13

FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 CONTRACT ITEMS					
0010	201.0120 CLEARING	708.000 ID		.		.
0020	201.0220 GRUBBING	722.000 ID		.		.
0030	204.0100 REMOVING PAVEMENT	29,335.000 SY		.		.
0040	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	125.000 SY		.		.
0050	204.0150 REMOVING CURB & GUTTER	12,375.000 LF		.		.
0060	204.0155 REMOVING CONCRETE SIDEWALK	5,480.000 SY		.		.
0070	204.0195 REMOVING CONCRETE BASES	91.000 EACH		.		.
0080	204.0210 REMOVING MANHOLES	20.000 EACH		.		.
0090	204.0215 REMOVING CATCH BASINS	5.000 EACH		.		.

CONTRACT: 20140408007

PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13

FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	204.0220 REMOVING INLETS	75.000 EACH		.		.
0110	204.0245 REMOVING STORM SEWER (SIZE) 01. 12-INCH OR LESS	2,302.000 LF		.		.
0120	204.0245 REMOVING STORM SEWER (SIZE) 02. 15-INCH TO 18-INCH	429.000 LF		.		.
0130	204.0291.S ABANDONING SEWER	30.230 CY		.		.
0140	205.0100 EXCAVATION COMMON	25,351.000 CY		.		.
0150	205.0501.S EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	5,600.000 TON		.		.
0160	211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 01. 5992-09-11	LUMP	LUMP			.
0170	213.0100 FINISHING ROADWAY (PROJECT) 01. 5992-09-11	1.000 EACH		.		.
0180	305.0110 BASE AGGREGATE DENSE 3/4-INCH	503.000 TON		.		.
0190	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	17,002.000 TON		.		.

CONTRACT: 20140408007

PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13

FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0200	305.0130 BASE AGGREGATE DENSE 3-INCH	16,390.000 TON		.		.
0210	416.0170 CONCRETE DRIVEWAY 7-INCH	890.000 SY		.		.
0220	440.4410.S INCENTIVE IRI RIDE	6,020.000 DOL	1.00000		6020.00	
0230	455.0115 ASPHALTIC MATERIAL PG64-22	398.000 TON		.		.
0240	455.0120 ASPHALTIC MATERIAL PG64-28	194.000 TON		.		.
0250	455.0605 TACK COAT	736.000 GAL		.		.
0260	460.1103 HMA PAVEMENT TYPE E-3	10,409.000 TON		.		.
0270	460.2000 INCENTIVE DENSITY HMA PAVEMENT	6,670.000 DOL	1.00000		6670.00	
0280	460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS	12,080.000 LF		.		.
0290	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	5.700 TON		.		.

CONTRACT: 20140408007
PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13
FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0300	465.0125 ASPHALTIC SURFACE TEMPORARY	138.000 TON		.		.
0310	520.8000 CONCRETE COLLARS FOR PIPE	2.000 EACH		.		.
0320	601.0600 CONCRETE CURB PEDESTRIAN	65.000 LF		.		.
0330	602.0410 CONCRETE SIDEWALK 5-INCH	39,840.000 SF		.		.
0340	602.0420 CONCRETE SIDEWALK 7-INCH	7,155.000 SF		.		.
0350	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	808.000 SF		.		.
0360	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	508.000 LF		.		.
0370	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	1,144.000 LF		.		.
0380	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	1,516.000 LF		.		.
0390	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	1,135.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0400	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	504.000 LF		.		.
0410	608.0321 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 21-INCH	599.000 LF		.		.
0420	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	1,265.000 LF		.		.
0430	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH	680.000 LF		.		.
0440	610.0114 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 14X23-INCH	234.000 LF		.		.
0450	610.0119 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH	59.000 LF		.		.
0460	611.0410 RECONSTRUCTING CATCH BASINS	3.000 EACH		.		.
0470	611.2033 MANHOLES 3X3-FT	19.000 EACH		.		.
0480	611.2044 MANHOLES 4X4-FT	11.000 EACH		.		.

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FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0490	611.2055 MANHOLES 5X5-FT	3.000 EACH		.		.
0500	611.2066 MANHOLES 6X6-FT	1.000 EACH		.		.
0510	611.3230 INLETS 2X3-FT	67.000 EACH		.		.
0520	611.8110 ADJUSTING MANHOLE COVERS	17.000 EACH		.		.
0530	611.8115 ADJUSTING INLET COVERS	8.000 EACH		.		.
0540	611.8120.S COVER PLATES TEMPORARY	4.000 EACH		.		.
0550	619.1000 MOBILIZATION	1.000 EACH		.		.
0560	620.0300 CONCRETE MEDIAN SLOPED NOSE	220.000 SF		.		.
0570	624.0100 WATER	475.000 MGAL		.		.
0580	625.0100 TOPSOIL	5,814.000 SY		.		.
0590	627.0200 MULCHING	1,148.000 SY		.		.

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FEDERAL ID(S): WISC 2014100, N/A, N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0600	628.1905 MOBILIZATIONS EROSION CONTROL	18.000 EACH		.		.
0610	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	10.000 EACH		.		.
0620	628.7005 INLET PROTECTION TYPE A	8.000 EACH		.		.
0630	628.7015 INLET PROTECTION TYPE C	90.000 EACH		.		.
0640	628.7020 INLET PROTECTION TYPE D	176.000 EACH		.		.
0650	628.7504 TEMPORARY DITCH CHECKS	165.000 LF		.		.
0660	628.7560 TRACKING PADS	14.000 EACH		.		.
0670	629.0210 FERTILIZER TYPE B	4.000 CWT		.		.
0680	630.0140 SEEDING MIXTURE NO. 40	22.000 LB		.		.
0690	631.0300 SOD WATER	255.000 MGAL		.		.
0700	631.1000 SOD LAWN	4,511.000 SY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0710	637.2210 SIGNS TYPE II REFLECTIVE H	944.590 SF		.		.
0720	637.2230 SIGNS TYPE II REFLECTIVE F	22.500 SF		.		.
0730	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 01. S-13-438	LUMP	LUMP			.
0740	642.5201 FIELD OFFICE TYPE C	1.000 EACH		.		.
0750	643.0100 TRAFFIC CONTROL (PROJECT) 01. 5992-09-11	1.000 EACH		.		.
0760	643.0300 TRAFFIC CONTROL DRUMS	43,078.000 DAY		.		.
0770	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	10,724.000 DAY		.		.
0780	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	21,448.000 DAY		.		.
0790	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	5,775.000 DAY		.		.
0800	643.0800 TRAFFIC CONTROL ARROW BOARDS	448.000 DAY		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0810	643.0900 TRAFFIC CONTROL SIGNS	18,830.000 DAY		.		.
0820	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE	160.000 SF		.		.
0830	643.1050 TRAFFIC CONTROL SIGNS PCMS	130.000 DAY		.		.
0840	646.0106 PAVEMENT MARKING EPOXY 4-INCH	658.000 LF		.		.
0850	646.0116 PAVEMENT MARKING EPOXY 6-INCH	10,068.000 LF		.		.
0860	646.0126 PAVEMENT MARKING EPOXY 8-INCH	437.000 LF		.		.
0870	646.0600 REMOVING PAVEMENT MARKINGS	3,115.000 LF		.		.
0880	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	1.000 EACH		.		.
0890	647.0206 PAVEMENT MARKING ARROWS BIKE LANE EPOXY	15.000 EACH		.		.
0900	647.0306 PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY	15.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0910	647.0356 PAVEMENT MARKING WORDS EPOXY	2.000 EACH		.		.
0920	647.0456 PAVEMENT MARKING CURB EPOXY	2,541.000 LF		.		.
0930	647.0576 PAVEMENT MARKING STOP LINE EPOXY 24-INCH	544.000 LF		.		.
0940	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	2.000 EACH		.		.
0950	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	1,414.000 LF		.		.
0960	647.0776 PAVEMENT MARKING CROSSWALK EPOXY 12-INCH	1,283.000 LF		.		.
0970	647.0786 PAVEMENT MARKING CROSSWALK EPOXY 18-INCH	886.000 LF		.		.
0980	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	8,645.000 LF		.		.
0990	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	4,839.000 LF		.		.
1000	649.1000 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH	212.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1010	650.4000 CONSTRUCTION STAKING STORM SEWER	113.000 EACH		.		.
1020	650.4500 CONSTRUCTION STAKING SUBGRADE	13,355.000 LF		.		.
1030	650.5000 CONSTRUCTION STAKING BASE	13,355.000 LF		.		.
1040	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	12,665.000 LF		.		.
1050	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 5992-09-11	LUMP	LUMP			.
1060	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5992-09-11	LUMP	LUMP			.
1070	652.0215 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	24.000 LF		.		.
1080	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	9,790.000 LF		.		.
1090	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	20,023.000 LF		.		.
1100	652.0325 CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH	3,731.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1110	652.0335 CONDUIT RIGID NONMETALLIC SCHEDULE 80 3-INCH	10,302.000 LF		.		.
1120	652.0800 CONDUIT LOOP DETECTOR	824.000 LF		.		.
1130	653.0905 REMOVING PULL BOXES	8.000 EACH		.		.
1140	654.0110 CONCRETE BASES TYPE 10	4.000 EACH		.		.
1150	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	3,291.000 LF		.		.
1160	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	1,747.000 LF		.		.
1170	655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG	1,837.000 LF		.		.
1180	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	1,463.000 LF		.		.
1190	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG	7,220.000 LF		.		.
1200	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	14,746.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1210	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG	44,238.000 LF		.		.
1220	655.0800 LOOP DETECTOR WIRE	2,228.000 LF		.		.
1230	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. BUTLER ST	LUMP	LUMP			.
1240	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. BLAIR ST	LUMP	LUMP			.
1250	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 03. BLOUNT ST	LUMP	LUMP			.
1260	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 04. PATERSON ST	LUMP	LUMP			.
1270	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 05. INGERSOLL ST	LUMP	LUMP			.
1280	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 06. BALDWIN ST	LUMP	LUMP			.
1290	657.0100 PEDESTAL BASES	30.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1300	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	2.000 EACH		.		.
1310	657.0410 TRAFFIC SIGNAL STANDARDS ALUMINUM 9-FT	7.000 EACH		.		.
1320	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	21.000 EACH		.		.
1330	658.0500 PEDESTRIAN PUSH BUTTONS	12.000 EACH		.		.
1340	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 01. BUTLER - JOHNSON	LUMP	LUMP			.
1350	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 02. BLAIR - JOHNSON	LUMP	LUMP			.
1360	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 03. BLOUNT - JOHNSON	LUMP	LUMP			.
1370	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 04. PATERSON - JOHNSON	LUMP	LUMP			.
1380	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 05. INGERSOLL - JOHNSON	LUMP	LUMP			.
1390	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 06. BALDWIN - JOHNSON	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1400	690.0150 SAWING ASPHALT	990.000 LF		.		.
1410	690.0250 SAWING CONCRETE	6,659.000 LF		.		.
1420	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	1,000.000 HRS	5.00000		5000.00	
1430	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	850.000 HRS	5.00000		4250.00	
1440	SPV.0035 SPECIAL 01. ABANDON SANITARY SEWER WITH SLURRY	2.220 CY		.		.
1450	SPV.0045 SPECIAL 01. TEMPORARY CROSSWALK ACCESS	3,213.000 DAY		.		.
1460	SPV.0045 SPECIAL 02. TEMPORARY BICYCLE ACCESS	168.000 DAY		.		.
1470	SPV.0060 SPECIAL 001. REMOVE BIKE RACK	10.000 EACH		.		.
1480	SPV.0060 SPECIAL 002. PROVIDE & INSTALL BIKE RACK	22.000 EACH		.		.
1490	SPV.0060 SPECIAL 003. PROVIDE & INSTALL TREE GRATE, 4-FT X 8-FT	4.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1500	SPV.0060 SPECIAL 004. ROOT PRUNING EXISTING TERRACE TREES	75.000 EACH		.		.
1510	SPV.0060 SPECIAL 005. PRECAST SIGN POST BASE	84.000 EACH		.		.
1520	SPV.0060 SPECIAL 006. SIGN POST BASE FOR CONCRETE INSTALLATION	8.000 EACH		.		.
1530	SPV.0060 SPECIAL 007. ERECTING CITY-OWNED SIGNS TYPE II	55.000 EACH		.		.
1540	SPV.0060 SPECIAL 008. TEMPORARY BUS STOP PAD	3.000 EACH		.		.
1550	SPV.0060 SPECIAL 009. BUS STOP BENCH	1.000 EACH		.		.
1560	SPV.0060 SPECIAL 010. UTILITY LINE OPENING (ULO)	44.000 EACH		.		.
1570	SPV.0060 SPECIAL 011. RECONNECT STORM SEWER LATERALS	18.000 EACH		.		.
1580	SPV.0060 SPECIAL 012. STORM SEWER TAP	7.000 EACH		.		.
1590	SPV.0060 SPECIAL 013. SEWER ELECTRONIC MARKERS	435.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0060 SPECIAL 014.					
1600	INLET 2X3-FT SPECIAL	1.000 EACH		.		.
	SPV.0060 SPECIAL 015.					
1610	INLET COVER TYPE H SPECIAL	45.000 EACH		.		.
	SPV.0060 SPECIAL 016.					
1620	INLET COVER TYPE H-S SPECIAL	44.000 EACH		.		.
	SPV.0060 SPECIAL 017.					
1630	INLET COVERS TERRACE TYPE 3 SPECIAL	6.000 EACH		.		.
	SPV.0060 SPECIAL 018.					
1640	TERRACE INLET TYPE 3 SPECIAL	6.000 EACH		.		.
	SPV.0060 SPECIAL 019.					
1650	CATCH BASIN SPECIAL	3.000 EACH		.		.
	SPV.0060 SPECIAL 020.					
1660	MANHOLE COVERS TYPE J SPECIAL	57.000 EACH		.		.
	SPV.0060 SPECIAL 021.					
1670	FLUID THERMAL BACKFILL	68.000 EACH		.		.
	SPV.0060 SPECIAL 022.					
1680	SANITARY LATERAL RECONNECT	199.000 EACH		.		.
	SPV.0060 SPECIAL 023.					
1690	SANITARY SEWER TAP	12.000 EACH		.		.

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1700	SPV.0060 SPECIAL 024. TEMPORARY SANITARY SEWER CONNECTION	1.000 EACH		.		.
1710	SPV.0060 SPECIAL 025. SANITARY SEWER ACCESS STRUCTURE (4-FT DIAMETER)	31.000 EACH		.		.
1720	SPV.0060 SPECIAL 026. SANITARY SEWER INTERNAL CHIMNEY SEA	9.000 EACH		.		.
1730	SPV.0060 SPECIAL 027. SANITARY SEWER CLEANOUT	10.000 EACH		.		.
1740	SPV.0060 SPECIAL 028. REMOVE CLEANOUT	1.000 EACH		.		.
1750	SPV.0060 SPECIAL 029. REMOVE SANITARY SEWER STRUCTURE	30.000 EACH		.		.
1760	SPV.0060 SPECIAL 030. ADJUST SEWER ACCESS STRUCTURE SPECIAL	2.000 EACH		.		.
1770	SPV.0060 SPECIAL 031. ABANDON SANITARY SEWER- PIPE PLUG	333.000 EACH		.		.
1780	SPV.0060 SPECIAL 032. RECONSTRUCT BENCH AND FLOWLINES	2.000 EACH		.		.
1790	SPV.0060 SPECIAL 033. PIPE SUPPORTS	10.000 EACH		.		.

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1800	SPV.0060 SPECIAL 034. INSTALL COMPRESSION COUPLING	3.000 EACH		.		.
1810	SPV.0060 SPECIAL 035. SLURRY BACKFILL	25.000 EACH		.		.
1820	SPV.0060 SPECIAL 036. REMOVE INSIDE DROP	2.000 EACH		.		.
1830	SPV.0060 SPECIAL 037. CUT-IN CONNECTION	26.000 EACH		.		.
1840	SPV.0060 SPECIAL 038. FURNISH & INSTALL HYDRANT	22.000 EACH		.		.
1850	SPV.0060 SPECIAL 039. CUT OFF EXISTING WATER MAIN	19.000 EACH		.		.
1860	SPV.0060 SPECIAL 040. ABANDON WATER VALVE BOX	54.000 EACH		.		.
1870	SPV.0060 SPECIAL 041. ABANDON WATER VALVE ACCESS STRUCTUR	23.000 EACH		.		.
1880	SPV.0060 SPECIAL 042. ABANDON HYDRANT	21.000 EACH		.		.
1890	SPV.0060 SPECIAL 043. ADJUST WATER VALVE BOX	7.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1900	SPV.0060 SPECIAL 044. FURNISH & INSTALL 4-INCH VALVE	2.000 EACH		.		.
1910	SPV.0060 SPECIAL 045. FURNISH & INSTALL 6-INCH VALVE	27.000 EACH		.		.
1920	SPV.0060 SPECIAL 046. FURNISH & INSTALL 8-INCH VALVE	13.000 EACH		.		.
1930	SPV.0060 SPECIAL 047. FURNISH & INSTALL 10-INCH VALVE	3.000 EACH		.		.
1940	SPV.0060 SPECIAL 048. FURNISH & INSTALL 12-INCH VALVE	26.000 EACH		.		.
1950	SPV.0060 SPECIAL 049. FURNISH & INSTALL 16-INCH VALVE	9.000 EACH		.		.
1960	SPV.0060 SPECIAL 050. FURNISH & INSTALL 20-INCH VALVE	3.000 EACH		.		.
1970	SPV.0060 SPECIAL 051. DISCONNECT & RECONNECT SERVICE LATERAL, 1-INCH	54.000 EACH		.		.
1980	SPV.0060 SPECIAL 052. DISCONNECT & RECONNECT SERVICE LATERAL, 1.5 OR 2-INCH	2.000 EACH		.		.
1990	SPV.0060 SPECIAL 053. ADJUST WATER SERVICE BOX	36.000 EACH		.		.

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2000	SPV.0060 SPECIAL 054. FURNISH & INSTALL CURB BOX	12.000 EACH		.		.
2010	SPV.0060 SPECIAL 055. FURNISH & INSTALL CURB STOP	16.000 EACH		.		.
2020	SPV.0060 SPECIAL 056. ABANDON EXISTING CURB BOX	13.000 EACH		.		.
2030	SPV.0060 SPECIAL 057. FURNISH EXCAVATION AND DITCH FOR LIVE TAP	7.000 EACH		.		.
2040	SPV.0060 SPECIAL 058. CASE WATER SERVICE LATERAL	6.000 EACH		.		.
2050	SPV.0060 SPECIAL 059. REMOVE STREET LIGHT	60.000 EACH		.		.
2060	SPV.0060 SPECIAL 060. LIGHTING CONTROL CABINET	6.000 EACH		.		.
2070	SPV.0060 SPECIAL 061. LED LUMINAIRE AND MOUNTING BRACKET TYPE 1	23.000 EACH		.		.
2080	SPV.0060 SPECIAL 062. LED LUMINAIRE AND MOUNTING BRACKET TYPE 2	7.000 EACH		.		.
2090	SPV.0060 SPECIAL 063. POLE 30-FOOT, 11 GAUGE	22.000 EACH		.		.

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PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13

FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2100	SPV.0060 SPECIAL 064. POLE 30-FOOT, 7 GAUGE	5.000 EACH		.		.
2110	SPV.0060 SPECIAL 065. POLE 20-FOOT, 7 GAUGE	6.000 EACH		.		.
2120	SPV.0060 SPECIAL 066. ELECTRICAL PULLBOX TYPE 1	44.000 EACH		.		.
2130	SPV.0060 SPECIAL 067. ELECTRICAL PULLBOX TYPE 3	7.000 EACH		.		.
2140	SPV.0060 SPECIAL 068. ELECTRICAL PULLBOX TYPE 5	8.000 EACH		.		.
2150	SPV.0060 SPECIAL 069. ELECTRICAL UTILITY ACCESS STRUCTURE	28.000 EACH		.		.
2160	SPV.0060 SPECIAL 070. CONCRETE BASE TYPE G	28.000 EACH		.		.
2170	SPV.0060 SPECIAL 071. CONCRETE BASE TYPE LB-1	85.000 EACH		.		.
2180	SPV.0060 SPECIAL 072. CONCRETE BASE TYPE LB-3	20.000 EACH		.		.
2190	SPV.0060 SPECIAL 073. CONCRETE BASE TYPE LB-8	12.000 EACH		.		.

CONTRACT: 20140408007
PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13
FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2200	SPV.0060 SPECIAL 074. CONCRETE BASE TYPE P	6.000 EACH		.		.
2210	SPV.0060 SPECIAL 075. CONCRETE BASE TYPE M	6.000 EACH		.		.
2220	SPV.0060 SPECIAL 076. CONCRETE BASE OFFSET	4.000 EACH		.		.
2230	SPV.0060 SPECIAL 077. TRANSFORMER BASE STEEL, 16-INCH	17.000 EACH		.		.
2240	SPV.0060 SPECIAL 078. TRANSFORMER BASE STEEL, 20-INCH	1.000 EACH		.		.
2250	SPV.0060 SPECIAL 079. MONOTUBE POLE, TYPE 9	4.000 EACH		.		.
2260	SPV.0060 SPECIAL 080. MONOTUBE ARM, 20-FOOT	1.000 EACH		.		.
2270	SPV.0060 SPECIAL 081. MONOTUBE ARM, 25-FOOT	1.000 EACH		.		.
2280	SPV.0060 SPECIAL 082. MONOTUBE ARM, 30-FOOT	2.000 EACH		.		.
2290	SPV.0060 SPECIAL 083. TRAFFIC SIGNAL CONTROL CABINET	6.000 EACH		.		.

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PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13

FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2300	SPV.0060 SPECIAL 084. TRAFFIC SIGNAL CONTROLLER	6.000 EACH		.		.
2310	SPV.0060 SPECIAL 085. NEMA-PLUS CONFLICT MONITOR	6.000 EACH		.		.
2320	SPV.0060 SPECIAL 086. TRAFFIC SIGNAL ETHERNET SWITCH	6.000 EACH		.		.
2330	SPV.0060 SPECIAL 087. TRAFFIC SIGNAL TROMBONE ARMS ALUMINUM, 18-FOOT	9.000 EACH		.		.
2340	SPV.0060 SPECIAL 088. TRAFFIC SIGNAL TROMBONE ARMS ALUMINUM, 12-FOOT	2.000 EACH		.		.
2350	SPV.0060 SPECIAL 089. TRAFFIC SIGNAL HEADS 8-INCH, 3-SECTION	12.000 EACH		.		.
2360	SPV.0060 SPECIAL 090. TRAFFIC SIGNAL HEADS 12-INCH, 3-SECTION	48.000 EACH		.		.
2370	SPV.0060 SPECIAL 091. TRAFFIC SIGNAL HEADS 12-INCH, 4-SECTION	5.000 EACH		.		.
2380	SPV.0060 SPECIAL 092. TRAFFIC SIGNAL HEADS 12-INCH, PEDESTRIAN	54.000 EACH		.		.
2390	SPV.0060 SPECIAL 093. TRAFFIC SIGNAL HEADS 12-INCH, PEDESTRIAN COUNTDOWN	54.000 EACH		.		.

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PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13

FEDERAL ID(S): WISC 2014100, N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2400	SPV.0060 SPECIAL 094. PEDESTRIAN SCALE STREET LIGHT UNIT	85.000 EACH		.		.
2410	SPV.0060 SPECIAL 095. BACKPLATES SIGNAL FACE 12-INCH, 3-SECTION	48.000 EACH		.		.
2420	SPV.0060 SPECIAL 096. BACKPLATES SIGNAL FACE 12-INCH, 4-SECTION	5.000 EACH		.		.
2430	SPV.0060 SPECIAL 097. COMMUNICATION NODE FOR PEDESTRIAN SCALE STREET LIGHT UNITS	85.000 EACH		.		.
2440	SPV.0060 SPECIAL 098. COMMUNICATION NODE FOR NON-PEDESTRIAN SCALE LIGHT UNITS	27.000 EACH		.		.
2450	SPV.0060 SPECIAL 099. DIMMING CONTROL MODULE	112.000 EACH		.		.
2460	SPV.0060 SPECIAL 100. ROAMVIEW GATEWAY	1.000 EACH		.		.
2470	SPV.0060 SPECIAL 101. CLAY TRENCH PLUG	15.000 EACH		.		.
2480	SPV.0060 SPECIAL 102. MANHOLE 3X3-FT SADDLED SPECIAL	3.000 EACH		.		.
2490	SPV.0090 SPECIAL 01. CONCRETE CURB AND GUTTER 24-INCH TYPE D SPECIAL	1,790.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2500	SPV.0090 SPECIAL 02. CONCRETE CURB AND GUTTER 30-INCH TYPE D SPECIAL	8,575.000 LF		.		.
2510	SPV.0090 SPECIAL 03. CONCRETE CURB AND GUTTER 24-INCH TYPE X SPECIAL	125.000 LF		.		.
2520	SPV.0090 SPECIAL 04. CONCRETE CURB AND GUTTER 30-INCH TYPE X SPECIAL	2,110.000 LF		.		.
2530	SPV.0090 SPECIAL 05. SIGN POST	675.800 LF		.		.
2540	SPV.0090 SPECIAL 06. REFLECTIVE SIGN POST	207.000 LF		.		.
2550	SPV.0090 SPECIAL 07. REMOVE ABANDONED STEAM TUNNEL	415.000 LF		.		.
2560	SPV.0090 SPECIAL 08. STORM SEWER PIPE PVC, 8-INCH	22.000 LF		.		.
2570	SPV.0090 SPECIAL 09. STORM SEWER PIPE PVC, 12-INCH	9.000 LF		.		.
2580	SPV.0090 SPECIAL 10. SANITARY SEWER LATERAL	5,194.000 LF		.		.
2590	SPV.0090 SPECIAL 11. SANITARY SEWER PIPE PVC, 8-INCH	3,004.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2600	SPV.0090 SPECIAL 12. SANITARY SEWER PIPE PVC, 10-INCH	1,992.000 LF		.		.
2610	SPV.0090 SPECIAL 13. SANITARY SEWER PRESSURE PIPE (C900), 8-INCH	750.000 LF		.		.
2620	SPV.0090 SPECIAL 14. SANITARY SEWER PRESSURE PIPE (C900), 16-INCH	90.000 LF		.		.
2630	SPV.0090 SPECIAL 15. REMOVE SANITARY SEWER PIPE	1,084.000 LF		.		.
2640	SPV.0090 SPECIAL 16. UTILITY TRENCH PATCH TYPE III	789.000 LF		.		.
2650	SPV.0090 SPECIAL 17. SELECT FILL FOR SANITARY SEWER	11,030.000 LF		.		.
2660	SPV.0090 SPECIAL 18. FURNISH & INSTALL 4-INCH PIPE & FITTINGS	53.000 LF		.		.
2670	SPV.0090 SPECIAL 19. FURNISH & INSTALL 6-INCH PIPE & FITTINGS	494.000 LF		.		.
2680	SPV.0090 SPECIAL 20. FURNISH & INSTALL 8-INCH PIPE & FITTINGS	717.000 LF		.		.
2690	SPV.0090 SPECIAL 21. FURNISH & INSTALL 10-INCH PIPE & FITTINGS	188.000 LF		.		.

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PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13
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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2700	SPV.0090 SPECIAL 22. FURNISH & INSTALL 12-INCH PIPE & FITTINGS	5,191.000 LF		.		.
2710	SPV.0090 SPECIAL 23. FURNISH & INSTALL 16-INCH PIPE & FITTINGS	894.000 LF		.		.
2720	SPV.0090 SPECIAL 24. FURNISH & INSTALL 20-INCH PIPE & FITTINGS	172.000 LF		.		.
2730	SPV.0090 SPECIAL 25. SELECT FILL FOR WATER MAIN	7,709.000 LF		.		.
2740	SPV.0090 SPECIAL 26. FURNISH & INSTALL 2-IN FOAM BOARD INSULATION	944.000 LF		.		.
2750	SPV.0090 SPECIAL 27. EXTEND & RECONNECT 1-INCH SERVICE LATERAL	632.000 LF		.		.
2760	SPV.0090 SPECIAL 28. EXTEND & RECONNECT 1. 5-INCH SERVICE LATERAL	82.000 LF		.		.
2770	SPV.0090 SPECIAL 29. EXTEND & RECONNECT 2-INCH SERVICE LATERAL	69.000 LF		.		.
2780	SPV.0090 SPECIAL 30. REPLACE COPPER SERVICE LATERAL 1-INCH	2,198.000 LF		.		.
2790	SPV.0090 SPECIAL 31. REPLACE COPPER SERVICE LATERAL 1.5 & 2-INCH	32.000 LF		.		.

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PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2800	SPV.0090 SPECIAL 32. ELECTRICAL WIRE LIGHTING, 14-3 GROUNDED	2,525.000 LF		.		.
2810	SPV.0090 SPECIAL 33. LOOP DETECTOR LEAD-IN CABLE SPECIAL	3,555.000 LF		.		.
2820	SPV.0090 SPECIAL 34. FIBER OPTIC CABLE 72-COUNT	6,369.000 LF		.		.
2830	SPV.0090 SPECIAL 35. SAND THERMAL BACKFILL	920.000 LF		.		.
2840	SPV.0105 SPECIAL 01. PROJECT DEWATERING	LUMP	LUMP			.
2850	SPV.0105 SPECIAL 02. WASTEWATER CONTROL	LUMP	LUMP			.
2860	SPV.0105 SPECIAL 03. CONSTRUCTION STAKING SANITARY SEWER	LUMP	LUMP			.
2870	SPV.0105 SPECIAL 04. CONSTRUCTION STAKING WATER MAIN	LUMP	LUMP			.
2880	SPV.0105 SPECIAL 05. OPTICAL SIGNAL PREEMPT	LUMP	LUMP			.
2890	SPV.0105 SPECIAL 06. TEMPORARY TRAFFIC SIGNALS (BUTLER-HAMILTON-JOHNSON)	LUMP	LUMP			.

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PROJECT(S): 5992-09-11, 5992-09-12, 5992-09-13

FEDERAL ID(S): WISC 2014100, N/A, N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2900	SPV.0105 SPECIAL 07. TEMPORARY TRAFFIC SIGNALS (BLOUNT-JOHNSON)	LUMP	LUMP			.
2910	SPV.0105 SPECIAL 08. TEMPORARY TRAFFIC SIGNALS (PATERSON-JOHNSON)	LUMP	LUMP			.
2920	SPV.0105 SPECIAL 09. TEMPORARY TRAFFIC SIGNALS (INGERSOLL-JOHNSON)	LUMP	LUMP			.
2930	SPV.0105 SPECIAL 10. TEMPORARY TRAFFIC SIGNALS (BALDWIN-JOHNSON)	LUMP	LUMP			.
2940	SPV.0105 SPECIAL 11. TEMPORARY VEHICLE DETECTION (BUTLER-HAMILTON-JOHNSON)	LUMP	LUMP			.
2950	SPV.0105 SPECIAL 12. TEMPORARY VEHICLE DETECTION (BALDWIN-JOHNSON)	LUMP	LUMP			.
2960	SPV.0105 SPECIAL 13. TEMPORARY LIGHTING	LUMP	LUMP			.
2970	SPV.0165 SPECIAL 01. COLORED CROSSWALK	3,410.000 SF	.			.
2980	SPV.0165 SPECIAL 02. COLORED BIKE BOX	510.000 SF	.			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2990	SPV.0180 SPECIAL 01. ARCHITECTURAL CONCRETE PAVEMENT 5-INCH	106.000 SY		.		.
3000	SPV.0200 SPECIAL 01. CONSTRUCT OUTSIDE DROP, 8-INCH	14.340 VF		.		.
3010	SPV.0200 SPECIAL 02. CONSTRUCT OUTSIDE DROP, 10-INCH	3.940 VF		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE